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ABSTRACT

A study conducted during the summer of 1969 researched the concept of culture with regard to the acculturation process of Spanish Americans. The Spanish Americans of north-central New Mexico were compared with the Anglo Americans living within that region. Data were collected on 799 adults from the 2 groups by means of personal interviews. Factor analysis identified a factor labeled the modern-traditional dimension which consisted of 6 value orientations: activism-fatalism, risk-taking, time, integration with family, preference for secondary social relations, and superstition. Analysis of variance was used to explore the relationship of the modernism score to various reference group characteristics. This analysis elaborated the nature of modernism and allowed assessment of changes taking place among various subgroups. Findings showed that acculturation is taking place, but Spanish Americans are not blending completely. Regression analysis indicated that, when other relevant factors are held constant, there are significant income differences between Spanish and Anglo household heads. (NQ)

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Assessing Cultural Change in North-Central New Mexico

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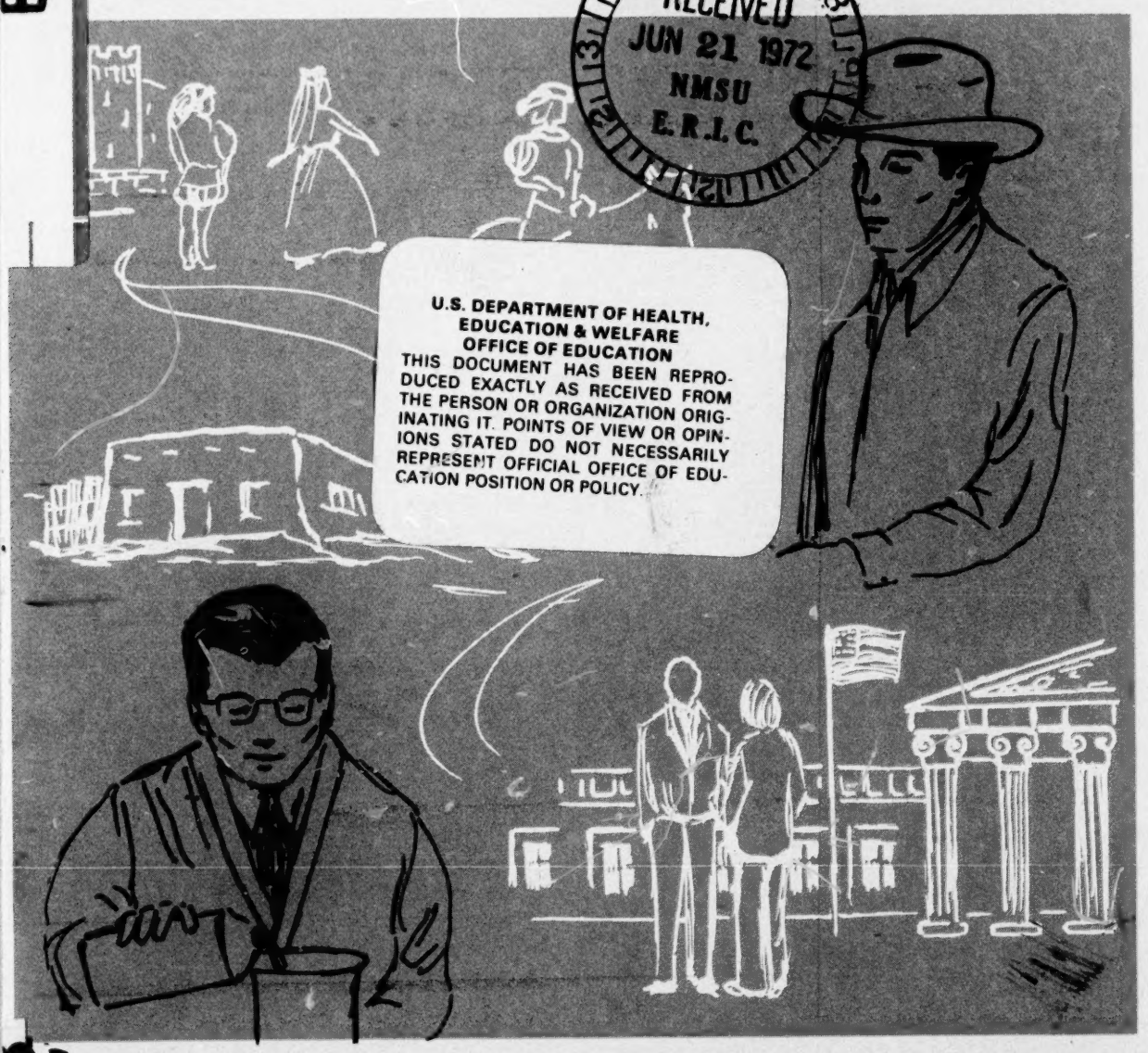

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January 1972 Las Cruces, New Mexico

Summary

This study probes the concept of culture to further knowledge of the acculturation process of an ethnic minority. Value orientations—a principal component of culture—are the yardstick used to measure acculturation. The Spanish-Americans of north-central New Mexico, representing an old and durable subculture now in a state of rapid transition, are compared with the Anglo-Americans living within the region. Two general questions were addressed: 1) Are the Spanish-Americans acculturating? If so, which ones and to what degree? A major general hypothesis was that the greater the cross-cultural contact, the more modern would be the value orientations and the smaller would be the ethnic differences. 2) Is full economic assimilation (equality) possible without complete acculturation? It was hypothesized that when other relevant factors are held constant, Spanish-Americans would not differ from Anglo-Americans in their income.

The data were collected by a personal interview survey of 799 respondents representative of the region's adult population of Spanish- and Anglo-Americans during the summer of 1969. A factor analysis showed that six value orientations compose a common factor which was labeled the modern-traditional dimension. The resulting scale clearly differentiates the Anglo-Americans from the Spanish-Americans. The six value orientation components were activism-fatalism, risk-taking, time, integration with family, preference for secondary social relations, and superstition. The composite modernism score was created by summing the six scales. The modernism scores strongly reflect the holder's objective situation as shown by the scale's high intercorrelations with education, income, and occupational status.

Analysis of variance was used to explore the relationship of the modernism score to various reference group characteristics. This exploration elaborated the nature of modernism and allowed the assessment of changes taking place among various subgroups. A multiple regression analysis was used to assess the importance of all the variables at one time. A number of characteristics were associated with modern value orientations. These include education, geographic mobility of household, use of printed mass media, youth (age), sex, income, occupation, and ethnicity. Self-evaluation of health was also related in a subsample for which data were available. Rural-urban residence and military service were related to modernism in the separate analyses of variance but were not significant in the overall regression analysis.

While eight reference group characteristics were associated with modernism, only two—education and income—were associated with cultural convergence, a narrowing of ethnic differences. But even among the high income and highly

educated subgroupings, a small but consistent difference in value orientation persists. Acculturation is clearly occurring, but the Spanish-Americans are not blending completely in the American melting-pot. Regression analysis showed that when other relevant factors—including value orientations—are held constant, there are still significant income differences for Spanish and Anglo-American household heads.

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Assessing Cultural Change in North-Central New Mexico

Clyde Eastman*

Value Orientations and the Assessment of Change

Many societies are in the state of rapid transition, creating a need for new and improved tools to assess the rate and nature of cultural change. This is true for several American minorities as well as for the many developing nation-states around the world. American society counts in its population a number of ethnic minorities which have been physically included by territorial expansion and by immigration. Some have moved quickly into full participation in American life while others have not. Several such ethnic minorities or subcultures are among the most impoverished elements of American society.

Data from the U.S. Census, from state employment agencies, and from similar sources describe the situation using such indices as per capita income, rates of unemployment, quality of housing and household amenities, health services, and welfare payments. These data describe in detail the physical and structural aspects of the life situation of the group, but they tell very little about the intangible aspects—the beliefs, sentiments, attitudes, and values—that differentiate the subculture from dominant American patterns. As will be shown later, value orientations are an important component of culture. In the longer term, values tend to reflect the objective situation and circumstances of society. However, in the shorter term, values tend to determine the situation, since most men behave in ways consistent with their cultural norms. Indeed the alternatives available to them are perceived through "cultural lenses" (7, pp. 6-7). For the design and execution of successful programs of poverty amelioration among minorities, it is necessary to know something about both the physical and the cultural situation.

There is considerable evidence for the emergence of a common

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"modern" constellation of value orientations among diverse populations as a result of the rather standardized demands of industrial life. The isolation of large populations all through history has led to the development of many unique cultures. It now seems that rapid and extensive communication and transportation, together with other technological changes, are producing a mass "world" culture. There are variations, of course, in such modern industrial countries as Japan, the United States, France, and South Africa which reflect the unique cultural heritage of each. But there seems to be an ever-increasing similarity among the industrial employees of such widely separated countries. The Japanese experience is particularly illuminating because Japan, the only thoroughly modern nation outside the Euro-American group, has blended traditional and modern in ways somewhat different from European-derived societies and thus provides enlightening illustrations of pluralistic modernism. For example, there is very low inter-organizational mobility even among highly skilled and professional workers. Japanese employers tend to be very paternalistic (by Western standards), and most new college graduates choose their first employer with care because few ever move to another.

The traditional Spanish-American village culture of north-central New Mexico is in transition. The traditional culture has pretty well disintegrated. What remains in the region today is the rubble of a subsistence agrarian culture and the chaos and confusion of a people searching for a new identity more in tune with the requirements of the contemporary world. Understandably, the Spanish-Americans want to preserve some semblance of their cultural traditions. At the same time they want to move into the 21st century as first class citizens of and full participants in the larger society.

In general, the dilemma of the Spanish-Americans stems from three causes. They lost a great deal of their agricultural land to the immigrating Anglos after the annexation of the territory by the United States in 1846. American agriculture has undergone so many profound structural changes in the past century that the traditional small, although intensive, units are no longer economically viable. Lastly, the Spanish-Americans have experienced such a substantial rise in material expectations that the produce of a subsistence village economy, satisfactory only one or two generations ago, is no longer considered adequate.

Basically, this study has been guided by two questions. Is there a measurable difference in cultural value orientations between Anglo- and Spanish-Americans and, if so, is this difference diminishing, i.e., are the cultures converging? Assuming there is a difference, is it possible for an incompletely acculturated minority to participate fully in the economic arena, as measured by income?

This study identifies the key value orientations which differen-

tiate culture and subculture and develops a scale which quantifies this difference. This "modernism" scale is an index of acculturation–a measure of where men stand on the continuum between traditional Spanish-American and modern Anglo culture. Since there is no time dimension in the data, the implications for change must be limited to differences within reference group categories at only one point in time. These analyses should be suggestive of where and how change occurs and should lead to the formulation of more adequate longitudinal models.

A number of common stereotypes of the "Mexican" exist in the thinking of many Anglo-Americans. Many are derogatory, and few contribute to the communication across ethnic boundaries which is so vital to real social and economic progress for the whole society. This study is concerned only with an objective quantification of a sample of values that are of key importance for effective participation in a modern society. It tests whether modernization is occurring and whether this ethnic group can fully participate in American society without complete acculturation. It is not posited that the Spanish-Americans must adopt completely Anglo value-orientations. Modern values may vary substantially, e.g., the Japanese example mentioned above. On the other hand, it is posited that a subsistence agrarian village culture is no longer satisfactory for participation in modern society no matter on which continent that society may be.

Historical Perspectives

The earliest settlement in what is now north-central New Mexico was in 1598 at San Juan near the junction of the Rio Grande and the Rio Chama. A few years later Santa Fe became the capital, and it has remained the principal administrative and cultural center until the present. During the 17th and 18th centuries, the Spanish settled in the narrow river valleys for some distance north of Santa Fe and along the Rio Grande south to Belen in central New Mexico (4, pp. 6-7). During the 19th century, with a lessening of the danger from the fierce plains Indians, Spanish settlements spread eastward across the Sangre de Cristo Mountains and out onto the plains to the south and east. The earlier settlements were based on small irrigated farms and depended on the surrounding mountains for wood and a limited amount of grazing. With the later settlements, sheep raising became important.

The Spanish were in intimate contact with the tractable Pueblo Indians, and a rather symbiotic relationship developed between the two. Both cultural and racial mixture bear witness to the intermingling that took place (4, p. 7). The Spanish population was small, growing from 2,000 to 24,000 in the 17th century (11, pp. 29-31).

Santa Fe and the surrounding region were the frontier of Spanish penetration into this part of the continent. For many generations, the desert, distance, and Indians made the journey to Mexico City or

Spain extremely arduous. For a long period, the principal contact with the outside world was the annual caravan from Chihuahua. The difficult journey isolated the region from many of the changes taking place in the rest of the world. As a consequence, a distinctive folk culture evolved which, though definitely and predominantly Spanish, preserved into the 19th and even 20th century many aspects strongly reminiscent of a Spain centuries before (13, pp. 441-475).

So the Spanish-Americans of north-central New Mexico have a much different history than the majority of the four million Mexican-Americans in the Southwest. The latter have recent antecedents in Mexico, while the former trace their ancestry directly back to Spain. Both groups manifest many similar cultural characteristics, but caution needs to be exercised when generalizing from these data to the larger population. There is considerable confusion and disagreement over the appropriate label for both ethnic groups. Those with recent antecedents in Mexico seem to prefer the term Mexican-American, while those in this study area seem to prefer Spanish-American. Other terms such as "hispano" and "chicano" are also frequently used. The terms Mexican-American and Spanish-American provide a convenient way of distinguishing between the two groups while also representing a consensus of current usage.

George I. Sanchez asserts that "by 1940 the Spanish-speaking people of New Mexico were more assimilated than those of any other southwestern state" (18, p. 8). John R. Martinez says that:

> "the Hispanos have participated more fully in politics [in New Mexico] than have the Spanish-speaking in any other area of the United States. It has been traditional for the Spanish New Mexicans to share in the elective and appointive offices of their state" (18, p. 47).

He goes on to say that they have used politics as a "social instrument for improvement" and as a shield against encroachments by the dominant society. "There is considerable evidence to indicate that the people of New Mexico tend to vote along ethnic lines" (3, p. 192). The practical effect of this is that Spanish-Americans control local politics in the area where they are in a majority and tend to be well represented in local governments where they are a substantial minority. Their representation in recent New Mexico legislatures closely reflects their makeup of the state population—about 28 percent (14). The U.S. congressional delegation from New Mexico has long had one or more Spanish-American members. But, on the other hand, Fincher points out that

> "Anglo Americans have dominated the executive and judicial branches of state government...Anglos have enjoyed a virtual monopoly of

> the four executive offices which commonly are considered the most important: governor, commissioner of public lands, superintendent of public instruction and treasurer" (3, p. 250).

Although some Spanish-Americans have participated, the Anglos have dominated the state political establishment since the Santa Fe Ring of the early territorial days (3, pp. 125-127).[1] This was true even when the Spanish-Americans were a majority of the population.

It is difficult to think of the Spanish-Americans as a minority group even in the larger context of New Mexico because of the obvious and pervasive influence of Spanish culture in every area of life: the food, the language, the architecture, the religion, place names, and so on. But the Spanish-Americans are indeed a minority in the larger society and are faced with the problems that face any minority. An important issue is how they are to move into full participation in the larger society and also maintain substantial aspects of their cultural heritage. The melting pot has long been the American dream, but there has been much concern in recent years over cultural pluralism—maintaining identity of diverse cultures within the larger society. This may be assuming an increasing importance because of decreasing opportunities for expression of individuality and uniqueness in the economic and political arenas.

Conditions in north-central New Mexico offer many similarities with the Ozark and Appalachian regions. All three regions had economies based on small scale or subsistence agriculture and on mining. Rugged terrain isolated people not only from the outside world but also within the regions, and this isolation led to the development of a subculture quite distinctive from the larger society. Technological changes in agriculture and mining undermined the economic base of each region.

The local economies can no longer provide the necessities of life, and those carrying the regional subculture are ill prepared to migrate to the growth centers in the larger society and to participate in that life. Observers of the different regions describe the subcultures in remarkably similar terms (21, p. 6; 8, p. 351). Both subcultures are described as having a present time orientation, being fatalistic, and having a "being" (versus "doing") orientation to activity. Inkeles et al. tested their attitudinal modernity instrument on Protestant Americans in Appalachian Kentucky and found that the structure of individual responses was basically similar to the attitudinal structure in the developing countries (19, pp. 353-379).

Geographically-separated societies often find similar solutions to the basic problems of human existence, especially when the physical environment is similar. The overriding difference among many similarities may be that of geo-

[1] The "Santa Fe Ring" was a small group of men who controlled territorial politics for some three decades after the Civil War.

graphical origins. The inhabitants of north-central New Mexico, as has already been noted, trace their ancestry directly back to the Iberian peninsula. The other regions were settled primarily by Anglo-American stock, with antecedents directly or indirectly in the British Isles. Yet the basic dilemma confronting the people of all three regions is the same: a crumbling economic base together with the lack of social skills necessary to function in today's world. These three regions are living testimony to the durability of basic value orientations and of culture. The institutions of social (re) incorporation have not functioned as effectively in these regions as those in other once predominantly agricultural areas which have sent a continuous stream of their young people forth, well equipped to seek their fortune in the larger society.

Whatever the difficulties of the past and present, there is hope for the future. Celia Heller concludes: "Recent studies suggest that the Mexican-Americans are now entering—to borrow Walt W. Rostow's term—the 'take off stage' of social mobility (6, p. 86). If this is true for the Mexican-American, it may be even more true for the Spanish-American of north-central New Mexico. Indeed, they are probably entering the next stage, which is—to continue Rostow's scheme—the "drive to maturity" (defined as an "interval of sustained if fluctuating progress") (17, pp. 8-9).

In summary, culture—and value orientations are important components of culture—is very important to understanding what is going on in a region. An understanding of culture is indispensable to the development of programs of amelioration. On the other hand, many aspects of the problem appear to be pancultural and a result of technological changes in the larger society. The pancultural aspects must always be borne in mind while studying the particulars of a culture.

Defining Modernism

Previous Value Studies

The most in-depth of several studies of Spanish-American values was a part of the Harvard Value Studies Project. Many publications by a variety of authors have emanated from that project, but it was Florence Kluckhohn who developed very thoroughly the theoretical framework of the project and, in addition, did most of the primary work with the Spanish-American community (8).

> "Value orientations are complex but definitely patterned (rank-ordered) principles, resulting from the transactional interplay of three analytically distinguishable elements of the evaluative process—the cognitive, the affective, and the directive

elements—which give order and direction to the ever-flowing stream of human acts and thoughts as these related to the solution of 'common human' problems. These principles are variable from culture to culture but are, we maintain, variable only in the ranking patterns of component parts which are themselves cultural universals" (8, p. 4).

This definition of "value orientation" differs from many other treatments because it defines them as "complex principles which are variable only in patterning" (8, p. 4). Three assumptions underlie this approach:

1. "...there is a limited number of common human problems for which all peoples at all times must find some solution.
2. ...while there is variability in solutions of all the problems, it is neither limitless nor random but is definitely variable within a range of possible solutions.
3. ...that all alternatives of all solutions are present in all societies at all times but are differentially preferred" (8, p. 10).

This study treated four of six crucial problems which the authors singled out as common to all human groups and, with one exception, dealt with three alternative solutions to each problem. The four problems treated were the relation of man to nature, the temporal focus of human life, the modality of human activity, and the modality of man's relationship to other men. Spanish-Americans were found to have first-order (i.e. dominant) orientations stressing subjugation to nature, present orientation, "being" activity, and individualism. Orientations in the dominant Anglo society stress: mastery over nature, future orientation, doing activity, and individualism.

The durability of the Spanish-American culture which has resisted assimilation during more than a century of Anglo political and economic domination is testimony enough to the strength of these value orientations. Cultures and values do change, however, and "basic change is usually, if not always, the result of the interplay of internal variations and external forces which are themselves variable" (8, p. 43). When pressure from the dominant culture is not great or when the difference in order-ranking among values is not great, value changes will not cause great disorganization in the system (8, p. 47). The low-pressure situation prevailed for Spanish-Americans until fairly recently. However, since the Depression and World War II, the outside world has come crashing in on the Spanish-American villages. Deteriorating economic conditions have caused many to seek work outside the region, widespread military service provided outside experience, and an expanding mass media and improved transportation have

provided greater contact with the dominant culture. All this has led to rising expectations and a much greater felt deprivation on the part of the minority members. Demands for change have become so imperative and urgent that the system is both socially and personally more disorganized now than only a few decades ago.

It follows from the theoretical framework that since cultures can be characterized or defined in terms of value-orientations, then the process of acculturation should be measurable in terms of the defining constellation of value orientations. Kluckhohn dealt with three alternatives in each value orientation, in keeping with the assumption that there are only a limited number of solutions to each basic problem. To assess the acculturation of a minority group into a dominant culture, it would seem legitimate to measure movement between the dominant orientations in each relevant values dimension. While this does not fully utilize Kluckhohn's theory of value variation, i.e., take into consideration second- and third-order orientations, it does recognize variation. Measurement along a bipolar continuum greatly simplifies the necessary methodology and interpretation of results, thus making the undertaking conceptually and practically manageable. A small number of value-orientations should define the cultural characteristics most relevant to full participation in the "modern" (i.e. according to the contemporary American model) world as opposed to the "traditional" (i.e. the Spanish-American village society) world. This approach should permit both an assessment of the rate and degree of acculturation and some evaluation of the development of cultural pluralism within the region.

Kahl has developed a modernism scale which is the composite score of seven value orientations from data collected in Brazil and Mexico. He sees values as "abstract principles that guide behavior" (7, p. 8) and says further:

> "It is a common value-system that holds a society together; through it, the members are taught to perceive the world in similar ways and to act toward one another in a predictable fashion. Occasionally the press of circumstance leads a man to violate the rules, but public opinion finds this threatening and demands punishment through law or other sanctions. A society without strong common values is unable to reach collective decisions and create viable institutions. And a man without belief in the values of his group is a man who is confused and distraught" (7, p. 9).

Kahl tried 14 different value scales and through factor analyses found a core of seven that were closely interrelated in both countries. They are activism, low integration with relatives, preference for urban life, individualism, low community stratification, mass-media participation, and low strati-

fication of life chances. In addition, risk-taking and family modernism were found to be highly intercorrelated to the core seven in the Mexican data. They were added to the instrument after the Brazilian data were collected.

His results show that it is possible and meaningful to measure the syndrome of modernism. Not only do the scales "hang together" in a factor analysis, but the scores can also be used as predictors of such things as educational aspirations and ideal family size. Modernism is highly correlated to socioeconomic status, and the latter explains about a third of the variation of the former. But modernism enables predictions in ways which go beyond what is possible by use of socioeconomic status alone (7).

Hypotheses

This study was guided by two propositions which have emerged from work on minority groups (1, pp. 652 and 654): 1) The more contact between cultures, the more alike they tend to become and 2) an ethnic minority can be assimilated without being acculturated into a society and vice-versa.

Value orientations have been used as the measure of culture, and it is assumed that they are valid indicators of more general cultural changes. It is almost impossible to measure change from data collected at only one point in time. The next best thing is to examine reference group characteristics associated with differing value orientations and to determine as accurately as possible which are influencing which and in what way.

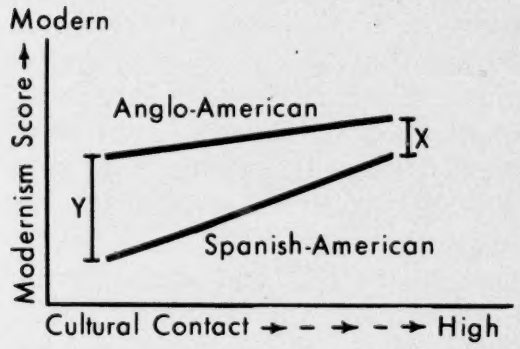
Contacts between the two cultures have increased markedly all during the 20th century. Improvement of transportation and communication in north-central New Mexico has more or less kept pace with that in the larger society. All-weather roads extend into every populated area, and most people have access to automobiles, radio, and TV. Military service has brought many males into intimate contact with the larger society. Many people have left the region in search of employment; some returned when an opportunity emerged near their place of origin. More people are getting more education now than formerly.

With this in mind, it seems necessary to demonstrate that consistent ethnic differences in value orientations can be measured and also to examine how this difference is related to different types of cross-cultural contacts–i.e., through formal education, use of mass media, etc.

Hypothesis 1: Spanish-Americans have more traditional value orientations than Anglos.

Hypothesis 2: The greater the contact with the dominant culture, the more modern Spanish-American value orientations are; further, ethnic differences diminish with greater contact. Figure 1 illustrates what is expected in the several subhypotheses detailed below. The Anglo line may be flat or may slope

Fig. 1. Graphic illustration of the anticipated effect of "cultural contact" on modernism scale scores.



slightly; the Spanish-American line should have a much greater slope if cultural convergence is occurring with increased contact, i.e., Y should be greater than X. If some ethnic difference is remaining, X should not be equal to zero.

Subhypothesis 2a: The more years of education, the more modern the Spanish-American value orientations; further, ethnic differences diminish at higher educational levels.

Subhypothesis 2b: The more the use of the mass media, the more modern the Spanish-American value orientations; further, ethnic differences diminish with more use.

Subhypothesis 2c: The greater the geographic mobility, the more modern the Spanish-American value orientations; further, ethnic differences diminish with higher mobility.

Subhypothesis 2d: Urban Spanish-Americans have more modern value orientations than do those with rural residence: further, ethnic differences are less among urban residents.

Subhypothesis 2e: Spanish-Americans who have served in the military have more modern value orientations than those who have not; further, ethnic differences are less for those with military service.

Occupation has importance besides being a point of contact between cultures. It is also the most important determinant of socioeconomic status, gives a major basis for self identity and self respect, influences patterns of friendships and associations, and provides the means of sustenance, as well as taking many of the workers' waking hours. Kahl found socioeconomic status to be the variable most highly correlated with value orientations (7, p. 153). This variable has been coded as occupational status to avoid a very unwieldy nominal scale not suited to these analyses.

Hypothesis 3: The higher the occupational status, the more modern the value orientations; further, ethnic differences will diminish at higher occupational statuses.

Because it is related to occupation and reflects economic participation, income should also be related to value orientations.

Hypothesis 4. The higher the income, the more modern the value orientations; further, ethnic differences diminish at higher incomes.

Two aspects of age could influence value orientations. First, the

stage in the life cycle could make a person more traditional. Second, membership in a later generation, if it is associated with more modern values, would mean that cultural changes are occurring with each new generation. Even though these two aspects cannot be separated, it is still useful to know whether age and values are associated. If there is no relationship, it can be inferred that no changes are occurring with succeeding generations. If age is inversely related to modern values this maybe due to changes between generations, but it may also be due to changes in chronological age—the life cycle—or to some combination of the two.

Hypothesis 5: Younger people have more modern value orientations, and older people more traditional ones; ethnic differences diminish at lower age levels.

Sex and health are not expected to be related to value orientation but are analyzed to determine whether any relationship does exist.

Hypothesis 6: Sex of the respondent is not related to his value orientation.

Hypothesis 7: Health of the respondent is not related to his value orientation.

The primary household language of Spanish-Americans should be a good alternate index of acculturation and therefore highly related to value orientations.

Hypothesis 8: Those speaking primarily English have more modern value orientations than those who speak both English and Spanish, who are in turn more modern than those speaking only Spanish.

Data were also collected and scales developed about willingness to commute and willingness to relocate.[2] It seems very appropriate and useful to test whether any relationship exists between such willingness and value orientations.

Hypothesis 9: There is no relationship between willingness to commute and value orientations.

Hypothesis 10: There is no relationship between willingness to relocate and value orientations.

A multiple regression will be used to determine which variables have a significant effect on modernism when the other variables are controlled. This will summarize the above analyses of variance.

A last hypothesis derives from proposition II above, which stated that an ethnic minority can be assimilated without being acculturated. If the above hypotheses, which predict a continuing cultural pluralism, are supported, it is then relevant to ask whether this unacculturated group has been assimilated into the economic life. Stated another way, are the culturally distinct Spanish-Americans realizing full participation in the economic life? All other factors taken into account, does ethnicity per se still make a difference in income?

[2] An associated study on these scales will be published at a later date.

Hypothesis 11: When other important reference group characteristics have been controlled, ethnicity is not related to the income of the household head.

The Study Area

The study area or region, as finally delimited, represents a compromise of cultural, economic, and political considerations. The Spanish-American population, in its densest concentration, occupies a more or less contiguous and compact geographical region. However, this region is interspersed with "islands" of Indian and Anglo culture, and Spanish-Americans are scattered over the entire state. Six counties had more than 50 percent Spanish-Americans in their populations in 1960 (20). These six counties, which comprise the most compact cultural region, are Rio Arriba, Taos, Mora, Santa Fe, San Miguel, and Guadalupe. The cultural region extends into south-central Colorado; two counties, with more than one-half Spanish-American population, are contiguous with the region along the state boundary. These counties also correspond closely to the area of original Spanish settlement and to the area of greatest poverty. Guadalupe County was dropped from the study area, and Colfax and Los Alamos counties were added to make the area compatible to the north-central New Mexico Development District (15). The two Colorado counties were excluded for the same reason (see figure 2). This involves only a relatively small proportion of the regional population. Los Alamos County is an integral part of the economic region, since it provides much employment to residents of the neighboring counties. It also provides a substantial "outside" Anglo population, which offers a comparison with selected strata of the larger society.

Data Collection

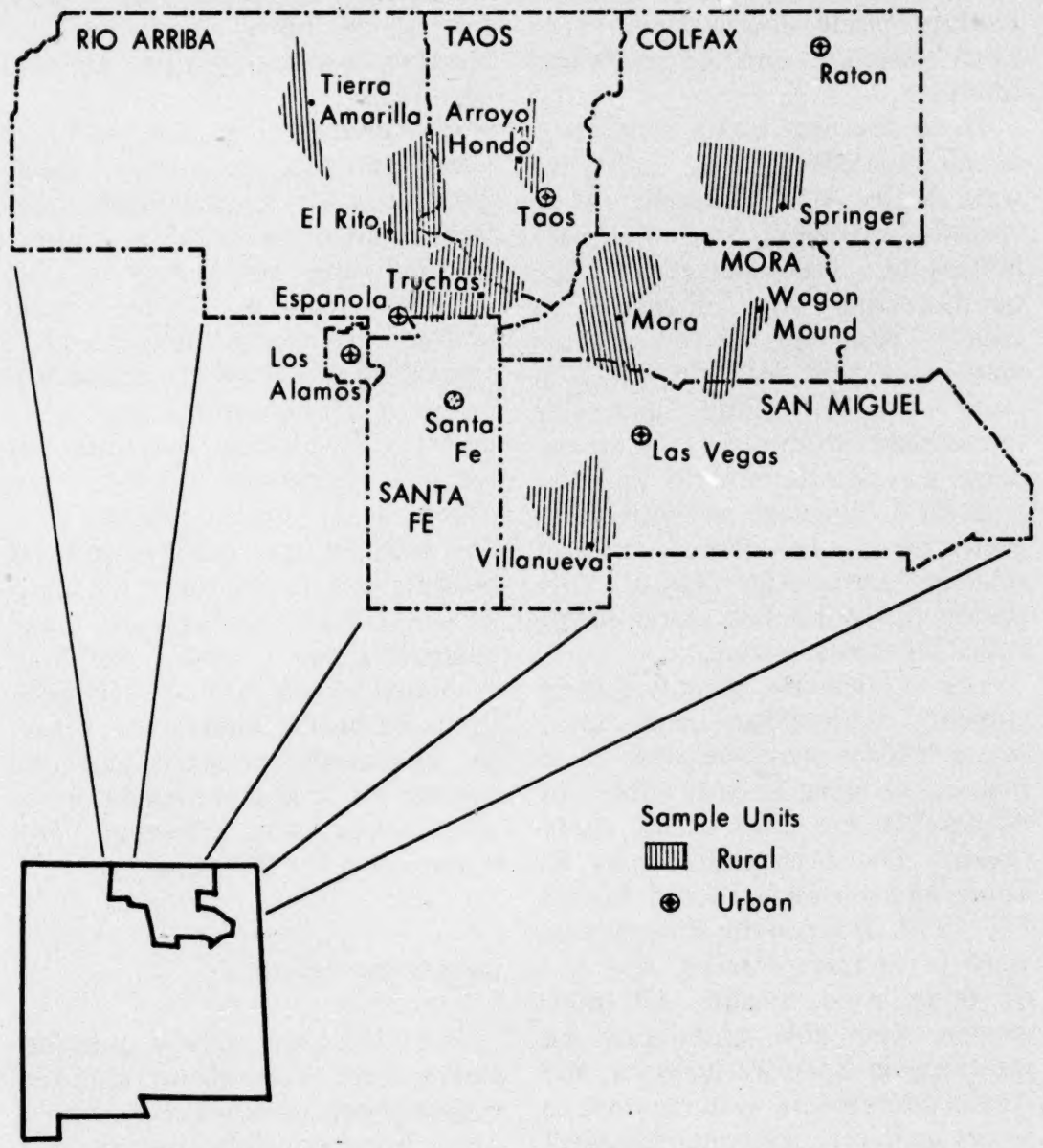
The data for this study were collected by personal interviews, with a target sample size of 800. Estimates of the 1969 rural and urban populations in the study area were obtained from the Rand McNally Commercial Atlas (16). The population of 153,800 was estimated to be 58 percent urban and 42 percent rural, so quotas of 454 urban interviews and 336 rural interviews were established.

The total urban population of the study area lived in Santa Fe, Los Alamos, Las Vegas, Raton, Taos, and Espanola. Each city was sampled according to its proportional share of the urban population. The rural population was much more dispersed and therefore more difficult and costly to sample adequately. Eight clusters of rural villages considered representative of the rural population were selected (figure 2). All the substantial concentrations of rural population in the region are included in these eight units. The sample size for each rural unit and for each component town or village

was determined by its proportional contribution to the total rural population.

This study concerned the active adult population and was therefore limited primarily to people between the ages of 18 and 65. Some people over 65 were included if they were employed full time, and some less than 65 were excluded if they were retired. Young people were excluded if they had not yet assumed a full adult role in the community, i.e., married or self-

Fig. 2. Study region, north-central New Mexico, rural and urban sample units.



supporting. Only one respondent was taken from each household.

During the field interviewing, attempts were made to obtain representative proportions of both major ethnic groups, both sexes, and all levels of occupational status. Guidelines to these population characteristics were obtained from census data (20). Once a neighborhood or village was selected, interviewers were instructed to start at a random point and contact every third household until its quota was filled.

If no one was home at a designated household, two call-backs were made. After a second unsuccessful call-back, an alternate household was selected. The questionnaire was designed to collect data for three separate studies: a land attitude study, a labor mobility study, and this modernism study. The questionnaire was translated into Spanish, and both language versions were pretested in Las Cruces and in southern Dona Ana County. Substantial revisions were made during and after the pretesting.

The interviewers, including three student enumerators and three research team members, were given further training in the village of Alcalde, in the heart of the study region. The interviewing was all done between June 16 and August 15, 1969. Four of the interviewers were of Spanish descent, and two of these were female. All interviewers were able to conduct an interview in Spanish; however, the Anglo interviewers were required to resort to it very infrequently. Most people in this age range in north-central New Mexico are fluent in English. Many speak Spanish or a mixture of Spanish and English to other Spanish-Americans, but most prefer to speak English with strange Anglos.

The author believes that the ethnicity of the interviewer was much less important than other characteristics. These would include sensitivity, empathy, and a basic interest in other people, plus a pleasing and somewhat forceful personality.

The interviewing ended with 799 complete and potentially usable questionnaires. Most of those interviewed had no trouble comprehending and responding to the factual portions (some were hesitant on income), but some had great difficulty with the attitudinal items. Their questions and comments showed that they did not really understand what was expected of them. Others were obviously answering in the quickest possible way to get rid of the interviewer. Both cooperation and comprehension were carefully evaluated at the end of each questionnaire by the interviewer. Sixty-six questionnaires were excluded because of low comprehension or low cooperation, leaving 733 respondents for these analyses.

Data Organization

Data from the survey questionnaires were entered on standard coding sheets from which computer cards were punched and verified.

Most data were coded directly from the questionnaire. One major exception was family income, which was recorded in a variety of terms. It was adjusted to gross annual family income (for 1968) and to gross annual income for the head of household. The second major exception was occupation, which was coded by using Duncan's "socioeconomic index" of occupations, adjusted NORC scores, and a population decile score (5). Where more than one job was held during the year, the score was assigned for the occupation of longest duration. When they were of equal duration, the higher score was used.

Missing responses in the attitudinal items were assigned random scores. Most items had less than one percent non-responses; a few had as high as two percent. Non-responses in non-attitudinal items were not changed.

Development of Scales

This modernism scale is an abridged and modified version of what Kahl used in Mexico and Brazil (7, pp. 30-34). It is abridged because of a limitation on the total number of items which could be included in the questionnaire. (This study is only a part of a larger one using one instrument.) The modernism scale is modified because of a desire to try three new scales: time orientations, faith in science, and trust in government. Modified versions of five scales used by Kahl in Mexico and Brazil were used here. In this study, "use of mass media" was treated as a behavioral variable rather than as a value orientation, as Kahl treated it. The complete questionnaire appears in appendix A.

Eight value orientations were hypothesized to constitute the modernism syndrome:

1. Activism-fatalism
2. Risk Taking
3. Time Orientation (future-present)
4. Integration with Family
5. Preference for Secondary Social Relations
6. Occupational Emphasis
7. Faith in Science
8. Trust in Government

Selection and development of items were guided by the primary consideration of whether they would be valid in both Spanish and English. Most of the borrowed items had been used in Latin America or in the Southwest, but usually they had been used only in one language in any given analysis. Even Kahl kept his Brazilian and Mexican data separate and compared the results after analyses were completed. However, this study required the use of two languages, in part because many Spanish-Americans mix the two in the course of normal conversation. Many thought about their responses in first one language and then the other. Language did not seem to cause any serious problems. The results were consistent with those of earlier studies, offering strong testimony for the reliability of the scales (7, pp. 23-44; 8, p. 351).

The results also corresponded very closely with the predictions

Table 1. Items and value scales composing the modernism scale

Scale	Factor Loading Item (scale)
ACTIVISM-FATALISM	(-.724)
1. One cannot change his own fate (destiny).	.613
2. When a man is born, the success he is going to have is already in the cards, so he might as well accept it; not fight against it.	.668
3. The secret of happiness is being content with what comes your way and not expecting too much out of life.	.566
RISK TAKING	(-.598)
The kind of job I would most prefer would be:	
4. A job where I am almost always on my own. or A job where there is nearly always someone available to help me on problems that I don't know how to handle.	.569
5. A job where I have to make decisions by myself. or A job where I have to make few decisions by myself.	.635
6. A job where I am the final authority on my work. or A job where there is nearly always a person or a procedure that will catch my mistakes.	.551
7. A job where I would be either highly successful or a complete failure. or A job where I could never be too successful, but neither could I be a complete failure.	.483
8. A job that is constantly changing. or A job that is changing very little.	.445
9. An exciting job, but one which might be done away with in a short time. or A less exciting job, but one which would undoubtedly exist in the company for a long time.	.384

Table 1. Continued

Scale	Factor Loading Item (scale)
TIME ORIENTATION	(-.583)
10. Man's life should be guided more by the problems of the present than by his concern for the future.	.537
11. Planning for the future makes a person unhappy since plans hardly ever work out anyway.	.602
12. Nowadays with world conditions the way they are, the wise person lives for today and lets tomorrow take care of itself.	.672
13. People often have very different ideas about what has gone before and what we can expect in life. Some people believe it best to give most attention to what is happening now in the present. They say that the past has gone and the future is much too uncertain to count on. Things do change, but is sometimes for the better and sometimes for the worse so in the long-run, it is about the same. Other people believe that it is almost always the ways of the future--the ways which are still to come--which will be best. These people think the best way to live is to look a long time ahead, work hard, and give up many things now so that the future will be better. Which way do you most agree with?	.383
INTEGRATION WITH FAMILY	(-.572)
14. If you have the chance to hire an assistant in your work, it is better to hire a relative than a stranger.	.607
15. When young people make plans for the future, parents need not be given first consideration.	.399
16. A man should be willing to sacrifice everything for his family (parents, brothers and sisters).	.590
SUPERSTITION	(-.518)
17. It is bad luck to have a black cat cross one's path.	.572
18. For most common illnesses, home remedies are better than modern medicine	.607

Table 1. Continued

Scale	Factor Loading Item (scale)
Preference for Secondary Social Relations	(-.494)
19. Meeting new people is usually embarrassing.	.601
20. People in a big city are cold and impersonal; it is hard to make friends there.	.432
Trust in Government	(-.156)
21. The control of New Mexico is in the hands of a small group and an ordinary citizen does not have much to say about things.	.623
22. On the whole, state officials are honest and eager to serve all the people impartially.	.684
23. Government officials are more interested in a good paying job and an easy life than they are with serving the people.	.692
Faith in Science	(.102)
24. Scientists and engineers will eventually be able to solve most any problem we have.	.533
25. One should rely heavily on scientific advice when making decisions on how or when to do things (e.g. buying a car or planting a garden).	.442
26. There is probably no disease that modern medicine will not be able to cure in the future.	.418
Occupational Emphasis	(.547)
27. The best way to judge a man is by his success in his occupation	.632
28. The most important qualities of a real man are determination and driving ambition.	.488

Note: All questions were either forced choice or in Likert format with four possible answers: 1) strongly agree, 2) agree, 3) disagree, or 4) strongly disagree. Likert items were scored 1, 2, 3, or 4; forced choice items were scored 1 or 2.
Source of items: See appendix B. For an inter-correlation matrix see appendix C.

(table 1). Each group of items that were hypothesized to index a particular value orientation were factor-analyzed separately, and those items with a loading of greater than .380 were retained.[3] The item factor loadings are shown in table 1. All the scales were verified by factor analysis essentially as hypothesized, with one exception: the faith in science items split into two separate factors. "Superstition" was the label given to this new value orientation. After the items in each scale were settled upon, a scale score was obtained by summing the numerical score of the component items. (All items were scored so that the most traditional responses received the lowest numerical score and the most modern the highest.) A second-order factor analysis was done on the nine scale scores to determine which value orientations compose modernism. The scale factor loadings are shown in parentheses in table 1. A correlation matrix of value scales appears in table 2. Six scales had much higher loadings in a common direction and clearly have a substantial underlying common dimension—modernism. The six scales that compose this modernism syndrome are:

1. Activism-fatalism
2. Risk Taking
3. Time Orientation
4. Integration with Family
5. Superstition
6. Preference for Secondary Social Relations

The factor loading of "trust in government," although in the right direction (as determined by the sign), was much lower than the six included factors. "Faith in science" had a low factor loading and was opposite to the expected direction. "Occupational emphasis" is supposed to reflect Weber's Protestant Ethic, which is thought to be a very important value orientation in American society. However, results of both item and scale analyses were very inconsistent. With the other scales, component items tended to behave in a logically consistent way, the excluded items being deselected because their factor loadings were too low. But some of the occupational emphasis items loaded so highly in conceptually inconsistent ways that only two of the original four items could be put together in the scale. Occupational emphasis was not part of Kahl's modernism syndrome in Brazil and Mexico (7, p. 37). Anderson had difficulty with the scale in Texas and New Mexico.[4]

[3] The mathematics of factor analysis is very complex, but the results are quite easy to interpret. Basically, the factor-loading of an item is the correlation between that item and the underlying dimension common to all the items. The choice of cut-off points or the lowest acceptable loading is rather arbitrary. It is usually arrived at by "feel," by looking at the output and choosing a level that separates the items on a factor in a theoretically meaningful way. It enables the empirical purification of the scales, using the field results to test whether the original scale construction was valid or not. For an introductory discussion of factor analysis, see Fred N. Kerlinger, *Foundations of Behavioral Research* (New York: Holt, Rinehart and Winston, Inc., 1965). For a thorough mathematical treatment, see Harry H. Harman, *Modern Factor Analysis* (Chicago: University of Chicago Press, 1960).

[4] Personal communication from James G. Anderson, Department of Sociology, Purdue University.

Table 2. Correlation matrix of value scales

Item	I	II	III	IV	V	VI	VII	VIII	IX
I. Risk Taking	....	.229	.329	-.034	.282	-.246	.481	.026	.355
II. Preference for Secondary Social Relations		....	.339	-.060	.238	-.257	.319	.127	.280
III. Time Orientation			....	-.005	.311	-.174	.470	.207	.225
IV. Faith in Science				....	-.076	.108	-.105	.131	-.035
V. Superstition					....	-.280	.342	.067	.310
VI. Occupational Emphasis						....	-.433	-.062	-.384
VII. Activism-Fatalism							....	.111	.395
VIII. Trust in Government								....	.102
IX. Integration with Family									....

This loading in an opposite direction to all the others would mean that traditionals put more emphasis on success in an occupation than do moderns. Such a finding would be important, but the matter needs to be investigated further. In view of the difficulty in constructing the occupational emphasis scale (compared to the other scales), it seems prudent not to put much confidence in the contrary-to-expected results.

Each numerical scale score was converted to a percentage of the total possible for that scale so that each scale would have equal weight when the six modernism components were totaled. That constituted the raw modernism score. An adjusted modernism score was calculated by multiplying each percentage scale score by its factor loading and then totaling the components. The adjusted and the raw scores have a product moment correlation of .997. The adjusted score was dropped from further consideration.

Composite modernism scores ranged from 176 to 558, with a mean of 378 and a standard deviation of 65. The distribution approached the normal but was slightly skewed toward the modern. The categories in table 3 were established by dividing the range of responses at the mean. Table 3 shows that Anglos have much more modern value orientations than do Spanish-Americans. Statistical verification of the relationship is presented in the analyses of variance in later sections. The composite modernism score was treated as a continuous variable and was used in all of the analyses which follow.

Many of the variables in these analyses are ordinal scales and not interval, as would be required to meet fully the assumptions of the product moment correlation, the Pearsonian r. Recent work has shown that moderate violations of this assumption do not seriously jeopardize the results if some care is taken to assure that other assumptions are reasonably well met (9, 10). Use of these techniques permits a much more sophisticated and thorough analysis than would be possible with non-parametric techniques. It seems advisable, therefore, to use the techniques and to take this into account when the results are being interpreted. In this study, cross-tabular analyses and chi squares were done for all the variables later done by analysis of variance. The results were almost exactly the same down to the level of significance. In two or three

Table 3. Percentage distribution of respondents, modernism score by ethnicity

Ethnicity \ Score	Traditional	Modern	Total
Spanish-American	63	37	100
Anglo-American	20	80	100

cases where differences occurred, they were due to one analysis just yielding the level required for significance while the other just missed. This close agreement gave additional confidence in the results.

Modernism and Cross Cultural Contact

The modernism score is designed to reflect a basic cultural predisposition to participation in the modern industrial society. Those who have a predisposition or constellation of value orientations should be successfully participating, i.e., have relatively higher socioeconomic status. The correlations in table 4 indicate that this is true.

The correlation of modernism with socioeconomic status, together with the factor analysis results presented earlier, is persuasive evidence for the validity of the theoretical construct modernism. The items selected for each scale measure a common dimension, and a substantial common dimension underlies all the scales. This latter is the traditional-modern dimension, hypothesized to reflect the changes in value orientations which occur with acculturation.

Table 5 shows that without exception the component scales are less highly correlated with the three measures of socioeconomic status than is the composite modernism score. This provides evidence for the thesis that while individuals may vary fairly widely on particular value orientations, they will be more consistent on their composite or aggregate orientation. In other words, while a modern individual may be fairly traditional in one or two values, the composite of all his values will closely reflect his objective situation.

Education

The hypotheses that modernism scores increase with higher levels of education and that there is a convergence of Anglo and Spanish-American value orientations at higher educational levels are strikingly confirmed by the results of the analysis of variance in figure 3

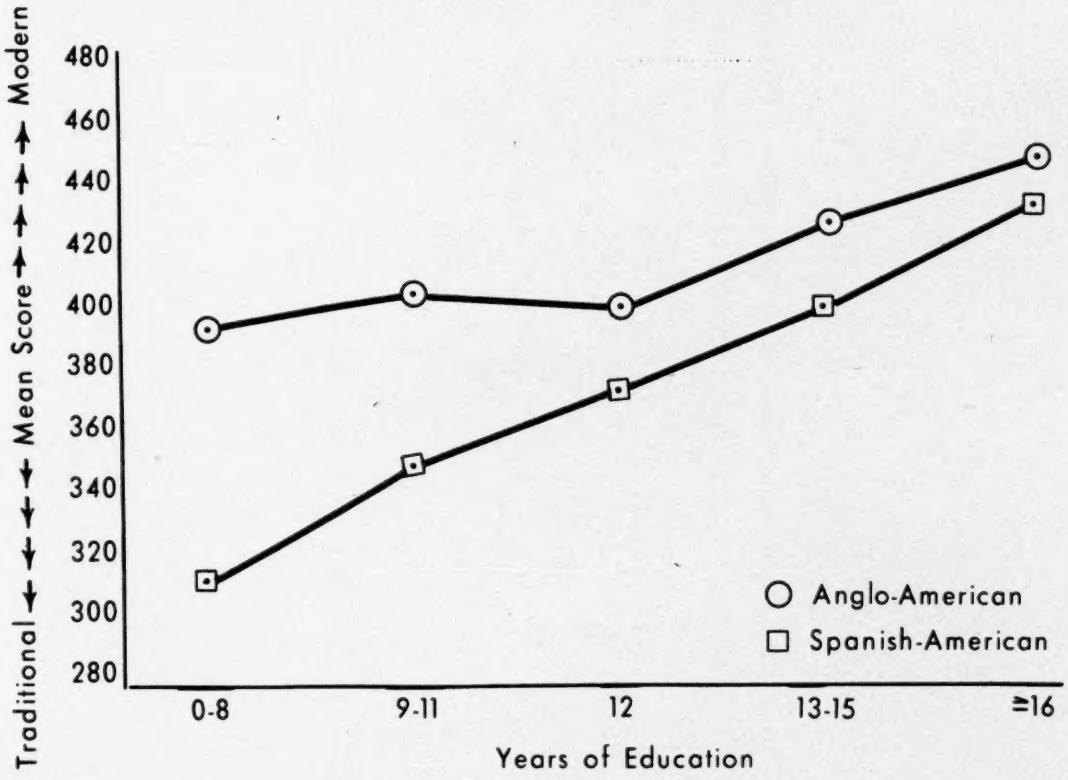
Table 4. Correlation matrix of modernism, years of education, occupational status and income of head of household

Item	I	II	III	IV
I. Years of education	....	.370	.581	.627
II. Income, head of household		....	.510	.391
III. Occupational status			....	.562
IV. Modernism				....

Table 5. Correlation matrix of modernism components, years of education, occupational status, and income of head of household

Item	I	II	III	IV	V	VI	VII	VIII	IX
I. Years of education	....	.370	.581	.454	.317	.352	.393	.512	.428
II. Income, head of household		....	.510	.329	.157	.202	.191	.318	.301
III. Occupational status			....	.453	.239	.283	.330	.482	.374
IV. Risk taking				....	.223	.322	.272	.477	.349
V. Preference for secondary social relations					....	.332	.224	.302	.255
VI. Time						....	.299	.463	.213
VII. Superstition							....	.331	.297
VIII. Activism-fatalism								....	.382
IX. Integration with family									....

Fig. 3. Mean modernism scale scores by ethnicity and years of education.



and tables 6 and 7.[5] The significant F in the ethnicity by education interaction (see table 6) provided statistical evidence for the convergence that is graphically visible in figure 3. Anglos had a mean modernism score of about 400 unless they had some college education, and then the score became more modern. The Spanish-Americans showed a consistent increase in modernism scores at every level of education in the table (though the difference between consecutive levels was not always significant). Although the difference between ethnic groups was not statistically significant at 12 years of education and above, it was consistently lower for the Spanish-Americans. This suggests that even the most highly-educated Spanish-American is never completely assimilated, although he comes close to the dominant society's value orientations. These results

[5]The analyses of variance reported in table 6 and subsequent tables followed the method set forth by Walter R. Harvey, "Least-Squares Analysis of Data with Unequal Subclass Numbers," ARS 20-8, Agricultural Research Service, U.S. Department of Agriculture, July 1960. The computer program was developed by Richard Glaze of the Computer Science Department, New Mexico State University.

The Duncan multiple range test used in table 7 and subsequent tables was calculated in the usual way, except a harmonic mean was used to take into account unequal subclass sizes (see Robert G. Steel and James H. Torrie, *Principles and Procedures of Statistics*, New York: McGraw-Hill Book Company, Inc., 1960, pp. 107-109). Only means *not* underscored by a common line are significantly different at the .01 level.

Table 6. Analysis of variance modernism score by ethnicity and years of education

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	731	4,200.48		
Ethnicity	1	165,870.11	74.91	.01 (6.63)
Education	4	92,798.06	41.91	.01 (3.32)
Ethnicity x education	4	11,103.93	5.01	.01 (3.32)
Error	722	2,214.28		

Table 7. Mean modernism scores ethnicity by years of education

Group*	SA-1	SA-2	SA-3	A-1	A-3	SA-4	A-2	A-4	SA-5	A-5
(N)	(130)	(121)	(148)	(12)	(84)	(43)	(17)	(56)	(35)	(86)
Mean Score**	308.8	345.3	370.7	390.4	398.7	399.4	401.2	425.9	432.5	447.2

*SA = Spanish-American, A = Anglo; 1 = 0-8, 2 = 9-11, 3 = 12, 4 = 13-15, 5 = 16 or more years of education.

**Only means not underscored by a common line are significantly different at the .01 level. This applies to all subsequent tables except table 29.

reaffirm the common notion of education as the great cultural leveler, i.e., that education will provide the minority group with the tools necessary for full participation in the larger society.

Residence and Birthplace

The population was divided into rural and urban using the standard census cutting point of 2,500. The largest city is Santa Fe, with a population of approximately 42,000, and the rest of the "urban" population is in cities of 15,000 or less (20). Taos actually had less than 2,500 in the 1970 census, but together with its contiguous "suburbs," the "urban" area has more than 2,500. According to the common current usage of the term "rural" which seems to include all areas outside the metropolitan cities, the whole region would qualify as rural.

As hypothesized, urban residents were more modern than rural residents (see table 8). However, urban residence did not result in a diminution of ethnic differences. The interaction term, though large, was not significant.[6] But convergence was occurring with rural residence, contrary to expectations. A similar finding by Liefer in his study of land attitudes led to the

[6]When the interaction term is not significant, the ethnic means are assumed to be parallel and are presented as one composite set of means.

Table 8. Analysis of variance modernism score by ethnicity and rural or urban residence

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	732	4,197.44		
Ethnicity	1	390,609.50	123.89	.01 (6.63)
Residence	1	40,666.79	12.90	.01 (6.63)
Ethnicity x residence	1	10,626.10	3.37	N.S.
Error	729	3,152.90		

investigation of the effects of birthplace (12). An analysis of birthplace might further elaborate the factors at work here. Tables 9 and 10 show that birthplace gave much the same results as did residence. There was a substantial but not significant interaction term (see table 9). The mean modernism scores were converging with birth in the region, opposite what might be expected. A tentative explanation for this unexpected trend is offered in the next section.

Geographic Mobility

Two indices of geographic mobility were used: most extreme household move, and years lived outside the region. The results of

Table 9. Analysis of variance modernism score by ethnicity and birthplace

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	731	4,186.40		
Ethnicity	1	141,803.30	45.76	.01 (6.63)
Birthplace	2	22,157.36	7.15	.01 (4.61)
Ethnicity x birthplace	2	7,247.08	2.34	N.S.
Error	726	3,098.86		

Table 10. Mean modernism scores by birthplace

Group	Within Region	New Mexico and Neighboring States	Outside
(N)	(439)	(146)	(147)
Mean Score	368.9	388.7	401.0

Fig. 4. Mean modernism scale scores by ethnicity and geographic mobility (most extreme household move).

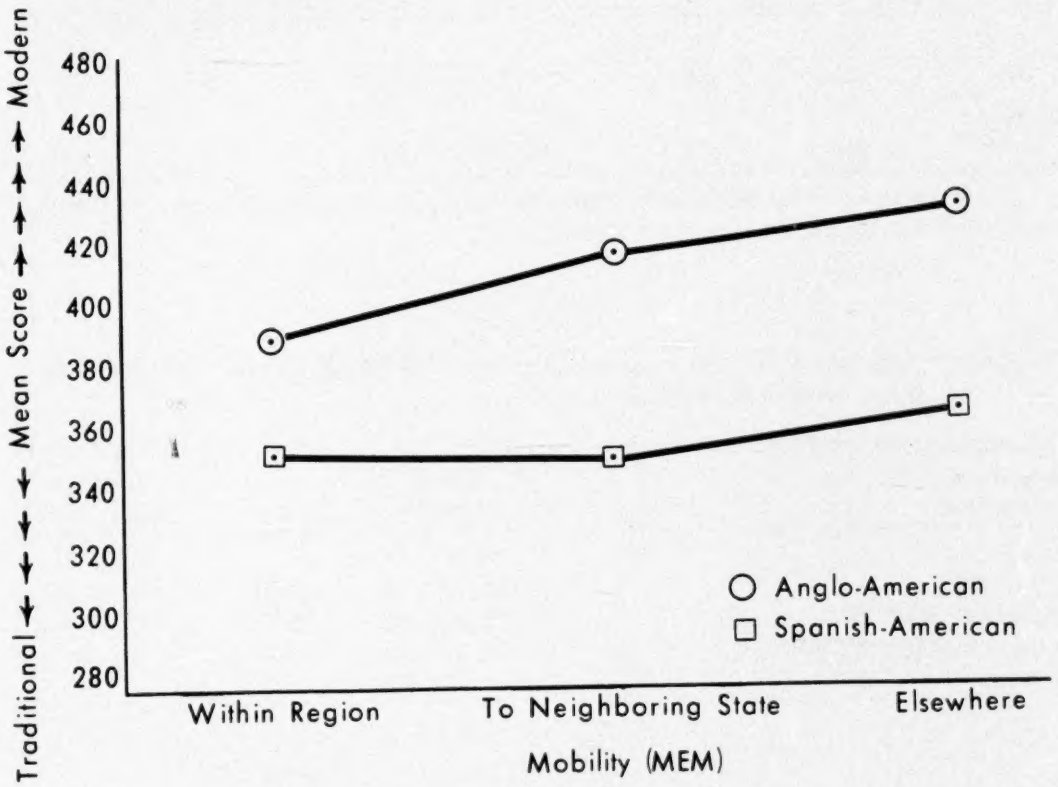


Table 11. Analysis of variance modernism score by ethnicity and mobility (most extreme household move)

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	732	4,197.44		
Ethnicity	1	454,582.27	146.26	.01 (6.63)
Mobility (MEM)	2	38,512.27	12.39	.01 (4.61)
Ethnicity x mobility (MEM)	2	12,250.96	3.94	.05 (3.00)
Error	727	3,107.95		

analysis of "the most extreme household move" are shown in figure 4 and tables 11 and 12. Anglos had more modern value orientations as their mobility increased, but Spanish-Americans did not. Further, there was a diminution of ethnic differences, but, contrary to expectation, it was between those with the lowest mobility. This indicates that having lived outside the region did not result in acculturation of the Spanish-Americans. It also indicates

Table 12. Mean modernism scores ethnicity by mobility (most extreme household move)

Group*	SA-2	SA-1	SA-3	A-1	A-2	A-3
(N)	(102)	(253)	(122)	(42)	(74)	(140)
Mean Score	348.3	351.6	365.7	389.3	418.5	431.5

*SA = Spanish-American, A = Anglo; Most extreme household move: 1 = Within Region, 2 = A Neighbor State, 3 = Elsewhere

Table 13. Analysis of variance modernism score by ethnicity and mobility (years lived outside the region)

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	568	4,500.34		
Ethnicity	1	121,749.76	37.23	.01 (6.63)
Mobility (YONCNM)	2	26,277.70	8.04	.01 (4.61)
Eth. x mobility (YONCNM)	2	7,208.05	2.20	N.S.
Error	563	3,270.02		

Table 14. Mean modernism scores by mobility (years lived outside the region)

Group	0 years	1-10 years	≧11 years
(N)	(221)	(81)	(267)
Mean Score	366.4	380.0	397.2

that Anglos who had never lived outside the region tended toward traditional Spanish-American values.

The results of the analysis of "years lived outside the region" can be seen in tables 13 and 14. Results were consistent with those above, except that the interaction effect was not significant. Values become more modern as mobility increases, but the trend of the interaction is toward convergence with low mobility.

Geographic mobility, birthplace, and residence obviously have a substantial commonality. Those whose household had never moved outside the region had usually lived in the region most of their lives, were probably born there, and often also had rural residence.

About the only migrants into the region have been Anglos who moved into Los Alamos, Santa Fe, and, to a much lesser extent, the other urban places. Thus taken together, the data support the hypothesis that higher mobility is associated with more modern values. But the hypothesis that with increasing mobility ethnic differences will diminish is not supported. Indeed the contrary was suggested by the data. The tentative explanation of reverse acculturation is offered; i.e., when Anglos have lived for a long time in an isolated and predominantly Spanish-American milieu, they tend to have more traditional value orientations.

Military Service

The results shown in tables 15 and 16 strongly support the hypothesis that those Spanish-Americans with military service have more modern value orientations than those without.[7] As expected, there was no difference among Anglos. The interaction is significant at the .01 level. Thus military service, and the resulting exposure to the dominant society, has a marked acculturating effect on Spanish-Americans.

Use of Mass Media

The hypotheses tested were: the greater the use of the mass media, the more modern value orientations; and there is a diminution of ethnic differences in value orientations with greater use of the mass media. When the hypotheses were developed and the questionnaire was designed, differential effects by types of media were not anticipated. A number of items were used to measure media participation. They were of two types: Do you have a radio and a TV, and do you receive newspapers, magazines? How much time do you spend reading newspapers and news magazines, reading for pleasure, and watching or listening to news, entertainment? Another item was designed to determine the relative importance of news sources, but

[7] Military service data were taken only on heads of household and only those respondents who were also heads of households were used in this analysis. This accounts for the small sample size (N=366).

Table 15. Analysis of variance modernism score by ethnicity and military service

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	365	4,938.63		
Ethnicity	1	491,910.82	144.57	.01 (6.63)
Military service	1	27,772.69	8.16	.01 (6.63)
Ethnicity x military ser.	1	24,281.40	7.14	.01 (6.63)
Error	362	3,402.47		

Table 16. Mean modernism scores ethnicity by military service

Group*	SA-N	SA-Y	A-N	A-Y
(N)	(121)	(125)	(55)	(65)
Mean Score	335.5	371.5	431.2	432.4

*SA = Spanish-American, A = Anglo; Y = Yes; N = No

too many respondents failed to answer it, and the results were not analyzed.

The results show that there was a marked difference between the influence of audio and of printed media. Possession of a radio and of a TV appeared to be strongly related to modernism. Spanish-Americans who did not have a radio or a TV were apparently extremely traditional. On the other hand, Anglos who did not have a TV were apparently extremely modern. (They are probably the intellectual types who eschew TV to spend more time reading or doing other things). Unfortunately, so few respondents did not have a radio and/or TV (about six percent of the total sample) that the subclasses were too small to analyze statistically. These results, while interesting and plausible, must be considered as only tentative.

Figure 5 and table 17 show the results of analysis of use of audio news media. Results of analysis of use of audio media for entertainment were very similar and for that reason were not presented.

The results were somewhat ambiguous, as there was no main effect, only a moderate interaction. Overall use of the audio media is not associated with the modernism score, but it does seem to have something of an acculturating effect on the Spanish-Americans, as indicated by the slope of their line (see figure 5) and the significant interaction term (see table 17).

Table 17. Analysis of variance modernism score by ethnicity and use of audio news media

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	728	4,153.57		
Ethnicity	1	367,082.96	117.62	.01 (6.63)
Use of audio news media	4	4,641.65	1.49	N.S.
Ethnicity x use of audio news media	4	10,248.49	3.28	.05 (2.37)
Error	719	3,120.94		

Fig. 5. Mean modernism scale scores by ethnicity and use of audio news media.

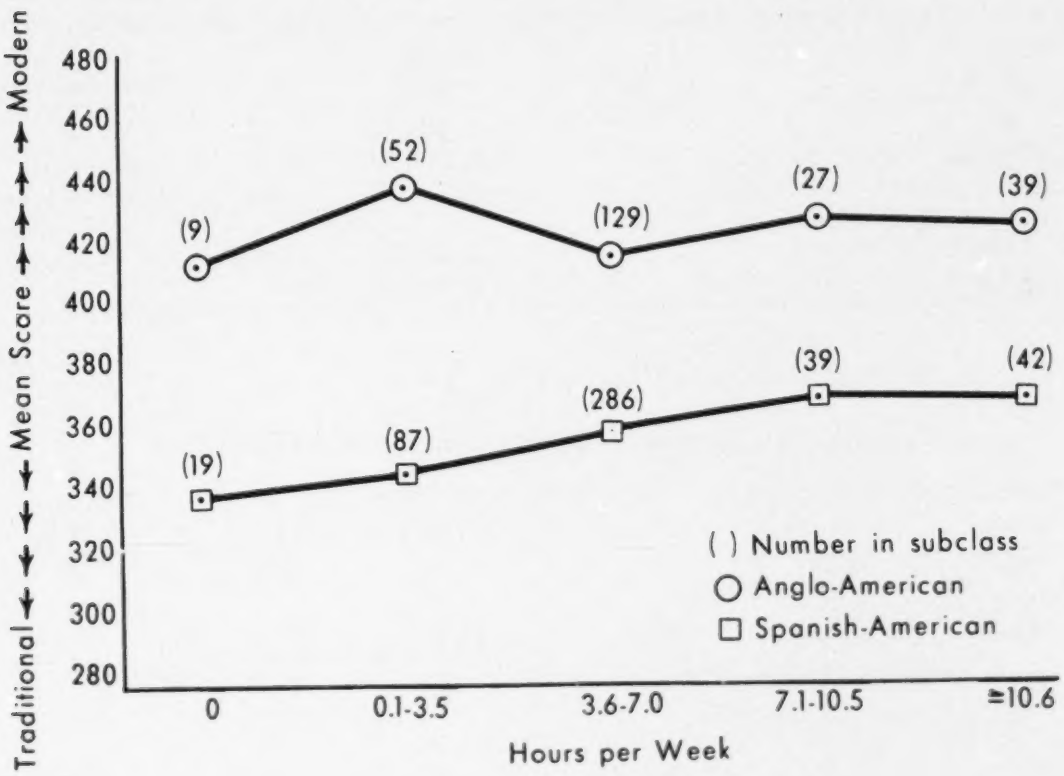


Table 18 to 20 show the results of analysis of receiving newspapers and use of printed media. In contrast to use of audio media, use of printed media showed a strong main effect and a marked absence of interaction, i.e. hypothesis a is supported and b is not supported. Use of printed media was highly and positively correlated to value orientations, but ethnic differences did not diminish with higher usage. Results of analysis of time spent reading books for pleasure gave

Table 18. Analysis of variance modernism score by ethnicity and receive newspapers

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	726	4,183.92		
Ethnicity	1	287,858.68	99.03	.01 (6.63)
Receive newspapers	1	127,161.00	43.75	.01 (6.63)
Ethnicity x receive newspapers	1	510.01	0.18	N.S.
Error	723	2,906.77		

Table 19. Analysis of variance modernism score by ethnicity and use of printed news media

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	727	4,202.88		
Ethnicity	1	254,577.3[illegible]	86.29	.01 (6.63)
Use of printed news media	4	33,621.87	11.40	.01 (3.32)
Eth. x use of printed news media	4	3,428.44	1.16	N.S.
Error	718	2,950.31		

Table 20. Mean modernism scores by use of printed news media

Group	0	0.1-3.5	3.6-7.0	≥10.6	7.1-10.5
(N)	(105)	(216)	(238)	(75)	(44)
Mean Score	355.0	383.0	391.4	408.2	420.8

very similar results; they are not shown.

Greater use of printed media is associated with acculturation of Spanish-Americans. While it is true that the ethnic differences did not diminish, Spanish-Americans who use the printed media more are more modern. They are more like the average Anglo than those who use the printed media less, even though there is a consistent difference between them and the high-use Anglos. Use of the mass media, though definitely an acculturating influence, has not resulted in much diminution of ethnic differences.

What differences in the media account for the differential results obtained? For one thing, the audio media may be more passive, i.e., many people "watch" TV or "listen" to the radio while they engage in other activities so that their whole attention is not focused on it (and thus it has little effect on them). The printed media may be more active, i.e., few people read while doing anything else, so that their whole attention is focused on it (and thus it has more effect on them). Perhaps moderns have a predisposition to read while traditionals prefer not to.

Age

Age reflects more than just years of existence. It should reflect the increasing level of education, increasing exposure via the mass media to the outside world, increasing material affluence, in short, a life experience that is ever changing. Tradition has had less influence in the formation of this generation's value orientations than with past generations.

As can be seen in tables 21 and 22, the results supported the hypothesis that younger people are more modern. Though not significant, the interaction term was substantial, and there was a definite trend toward ethnic convergence with youth. However, the result did not provide strong evidence for the hypothesis of diminution of ethnic difference among younger people.

Sex

Sex and the variable that follows were introduced to elaborate as completely as possible the nature of modernism. It was hypothesized that they would not be related to modernism, but they were examined to see if they might be related in some unanticipated way. As can be seen in table 23, sex was related to value orientations, males being more modern and females more traditional. The interaction effect with ethnicity was not significant.

Table 21. Analysis of variance modernism score by ethnicity and age.

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	732	4,197.44		
Ethnicity	1	689,722.57	227.30	.01 (6.63)
Age	4	20,394.64	6.72	.01 (3.32)
Ethnicity x age	4	6,702.10	2.21	N.S.
Error	723	3,034.39		

Table 22. Mean modernism scores by age

Group	≥60	50-59	40-49	≤29	30-39
(N)	(64)	(139)	(190)	(173)	(167)
Mean Score	363.7	375.9	386.1	394.3	399.9

Table 23. Analysis of variance modernism score by ethnicity and sex

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	732	4,197.44		
Ethnicity	1	754,542.29	238.48	.01 (6.63)
Sex	1	32,150.65	10.16	.01 (6.63)
Ethnicity x sex	1	5,797.98	1.83	N.S.
Error	729	3,163.91		

Health

Tables 24 and 25 show that health was related to value orientations. The measure used here was a general overall self-evaluation of the state of health of the head of household. This accounted for the smaller sample size (N=375) in this particular analysis. Again the interaction was not significant.

Primary Household Language

Primary household language should be a very sensitive indicator of acculturation among Spanish-Americans and should be very highly correlated to modern-traditional value orientations. As one participates more widely in activities in the larger society, his facility in its language increases at the expense of the second tongue, which is used less and less. Therefore, language should reflect the net effect of participation in the larger society just as value orientations are supposed to do. As can be seen in tables 26 and 27, the result strongly supported the hypothesis that those speaking primarily English were more modern than those speaking both languages, who were in turn more modern than those speaking primarily Spanish. It seems that primary household language is indeed an index of the level of acculturation. This is in contrast with efforts of Kuvlesky and associates in the lower Rio Grande Valley of Texas.[8] They were less successful with more complex indices.

Willingness to Commute and to Relocate

Partially comparable data from a Mississippi study indicate that modern value orientations are not related to a willingness to relocate (2). The data are not strictly comparable because in that study "willingness to relocate" was only part of a more complex "willingness to change" dimension. A "fatalism" somewhat different from the scale in this study was the values index. This result led to the hypothesis that modernism scores were not related to willingness to commute or willingness to relocate.

[8]Personal communication from William P. Kuvlesky, Department of Rural Sociology, Texas A&M University.

Table 24. Analysis of variance modernism score by ethnicity and health

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	374	4,887.36		
Ethnicity	1	195,494.72	63.83	.01 (6.63)
Health	3	31,712.72	10.35	.01 (3.78)
Ethnicity x health	3	4,394.96	1.44	N.S.
Error	367	3,062.68		

Table 25. Mean modernism scores by health

Group	Poor	Fair	Good	Excellent
(N)	(34)	(51)	(174)	(116)
Mean Score	357.0	370.2	390.1	416.5

Table 26. Analysis of variance modernism score by primary household language

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	476	3,438.67		
Primary household language	2	130,572.34	44.99	.01 (4.61)
Error	474	2,902.24		

Table 27. Mean modernism scores by primary household language

Group	Spanish	Both	English
(N)	(102)	(285)	(90)
Mean Score	316.8	356.6	390.3

Willingness to commute and willingness to relocate scores were developed from questions that asked the head of household how far he would commute or move to secure employment under various conditions ranging from equal conditions to $300 per month more than he (she) was then earning. The most extreme commuting distance

was staying over the week and returning home only on weekends. These analyses are based on the answers to the most extreme enticement, i.e., $300 additional monthly earnings. Tables 28 and 29 show the results of the analysis of willingness to commute. Generally those who show a greater willingness to commute have more traditional value orientations. Higher willingness probably reflects the extreme lengths that many with low occupational status have to go in order to secure employment. Such respondents often said it was difficult to find housing they could afford or expressed a reluctance to move due to the temporary or uncertain nature of many lower status jobs. Whatever the explanation, the hypothesis of no relationship between modernism and willingness to commute was not supported.

The analysis of variance showed a statistically significant relationship (at the .05 level) between modernism and willingness to relocate, plus an interaction significant at the .01 level (see table 30). The low mean modernism scale of the Anglos who were willing to relocate anywhere seemed to account for most of both effects (see tables 30 and 31). No firm conclusion could be drawn from these results.

Table 28. Analysis of variance modernism score by ethnicity and willingness to commute

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	696	4,202.04		
Ethnicity	1	487,769.35	158.48	.01 (6.63)
Willingness to commute	3	11,131.05	3.62	.05 (2.60)
Ethnicity x willingness to commute	3	5,386.07	1.75	N.S.
Error	689	3,077.67		

Table 29. Mean modernism scores by willingness to commute

Group	Weekends	1-1½ Hrs.	Not	15-30 Min.
(N)	(277)	(213)	(92)	(115)
Mean Score*	379.4	392.5	394.6	400.2

*Only means not underscored by a common line are significantly different at the .05 level

Table 30. Analysis of variance modernism score by ethnicity and willingness to relocate

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	721	4,163.44		
Ethnicity	1	720,371.06	229.29	.01 (6.63)
Willingness to relocate	2	8,912.44	2.84	.05 (2.60)
Ethnicity x willingness to relocate	2	15,342.24	4.88	.01 (4.61)
Error	716	3,141.83		

Table 31. Mean modernism scores by willingness to relocate

Group*	SA-2	SA-1	SA-3	A-3	A-1	A-2
(N)	(125)	(226)	(119)	(94)	(106)	(52)
Mean Score	350.0	356.0	356.8	405.2	429.1	431.0

*SA = Spanish-American, A = Anglo; 1 = Not Willing, 2 = As Far as a Neighbor State, 3 = Anywhere

The "willingness" variables reflected, of course, what people say they will do under hypothetical conditions. They did not reflect what people actually expect to happen nor what people will "really" do. In this way, they differed from the other variables in this section which do reflect actual past behavior.

One limitation in these analyses should be noted at this point. These data are only about actual residents of the region. They do not reflect the value orientations of those who have left and not returned. Many Spanish-Americans have emigrated permanently from the region, and they may well have quite different value orientations from their contemporaries who remained behind or who came back.

Acculturation and Assimilation

Occupational Status and Income

The principal occupation of the head of the household was given a rank score using Duncan's index (5, pp. 275-294). The occupations were divided into four categories for the analysis of variance. The

categories approximate unskilled blue collar, skilled blue collar, white collar, and professional-managerial. Results of the analysis of variance supported the hypothesis that as occupational status increases value orientations become more modern, at least through the first three categories (tables 32 and 33). White collar and professional-managerial had essentially the same modernism scores. Not too much emphasis should be placed on these category titles, which are at best only rough characterizations of the various occupations included in them. The point is that as rank order of occupational status improved, values became more modern. However, there was no diminution of ethnic differences in the higher status occupations (see the low interaction term in table 32). Occupational status contributed to more modern values in both groups but did not contribute to cultural convergence. This is important because occupation could be expected to contribute substantially to cultural convergence.

Higher status occupations necessitate more contact with the dominant culture, and a more "Anglo behavior" would be required in them. Many lower status jobs require little if any contact with Anglos. Another possible difficulty could be in the variable itself. The status dimension of occupation may not be most important in this context, and some other dimension may do better. Occupation presents a particularly difficult problem in that it consists of a multitude of nominal categories which are quite difficult to rank or classify consistently. Whatever the difficulties with this treatment of occupation, the results indicate that it is still a useful vari-

Table 32. Analysis of variance modernism score by ethnicity and occupational status

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	732	4,197.44		
Ethnicity	1	168,492.95	64.81	.01 (6.63)
Occupation	3	86,415.01	33.24	.01 (3.78)
Ethnicity x occupation	3	2,228.14	0.86	N.S.
Error	725	2,599.84		

Table 33. Mean modernism score by occupational status

Group	Unskilled	Skilled	"White Collar"	Professional
(N)	(159)	(318)	(161)	(95)
Mean Score	349.9	379.5	415.4	419.0

able in this form.

Income of the head of household performed very much as hypothesized.[9] As incomes went up, the values became more modern, and ethnic differences diminished somewhat (see figure 6 and tables 34 and 35). Ethnic differences were not significant at income levels of $6,000 to $12,000, but they were significantly different at the highest level. The overall pattern makes the important point: modern values and income are directly related and, although there is some convergence, ethnic differences remain fairly marked and consistent.

[9]There are only 698 cases in this analysis because 35 respondents refused to give their income.

Summary Analyses

The separate relationships of the several variables to the modernism score when controlled for ethnicity should be compared with the effects of each when all the others have been controlled. Multiple regression does this.[10] To simplify the regression somewhat, only one variable from each class of reference group characteristics was used. Use of the printed media was selected from the various media-use measures, only rural and urban residence was considered and not

[10]All regression analyses were done using the Double Precision Multiple Regression Program–MUREG–(October 1969 version,) Cornell University Computing Center.

Fig. 6. Mean modernism scale scores by ethnicity and income of the head of the household.

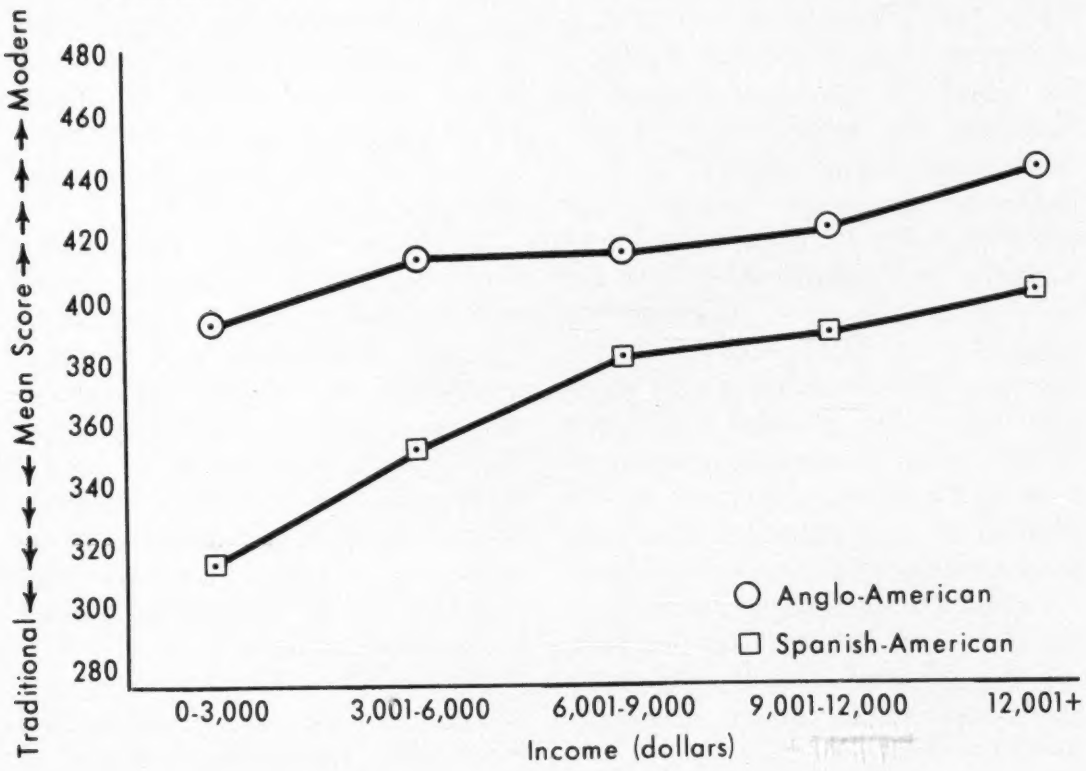


Table 34. Analysis of variance modernism score by ethnicity and income of head of household

Source of Variation	d.f.	Mean Square	F	Level of Significance
Total	698	4,222.56		
Ethnicity	1	191,964.16	70.93	.01 (6.63)
Income (HOH)	4	41,819.16	15.45	.01 (3.32)
Ethnicity x income (HOH)	4	9,544.07	3.53	.01 (3.32)
Error	689	2,706.31		

Table 35. Mean modernism scores ethnicity by income of head of household

Group*	SA-1	SA-2	SA-3	SA-4	A-1	SA-5	A-2	A-3	A-4	A-5
(N)	(115)	(195)	(82)	(56)	(20)	(9)	(35)	(57)	(67)	(63)
Mean Score	316.43	351.8	382.6	390.6	393.2	406.4	411.5	412.6	421.2	442.1

*SA = Spanish-American, A = Anglo; Income (head of household): 1 = 0-3,000, 2 = 3,0001-6,000, 3 = 6,001-9,000, 4 = 9,001-12,000, 5 = 12,001+

birthplace, and the most extreme move of the household was selected from the geographic mobility indicators. Generally, the criterion for selection was apparent magnitude of the relationship to the modernism score. Results from a multiple regression analysis are shown in table 36. Eight of the nine variables have significant effects on the modernism score and together account for 52.7 percent of the variance. However, a separate stepwise regression showed that only three variables—education, occupation, and ethnicity—account for 50 percent of the variance. The high intercorrelation of the independent variables is such that only a few key variables will account for the bulk of the variation, and only very small increments can be added by more variables.

Other small subsets of variables may account for nearly as much variance as education, occupational status, and ethnicity. No particular effort has been made to isolate other subsets, since for most theoretical and practical purposes, this set is the more important.

Health and military service data were collected only about the heads of households; so they could not be included in this regression. Another regression on those respondents who were also heads of household (N=375) showed health to have a significant effect, while military service did not. There is not much reason to suppose that these two variables would behave differently in the whole sample.

Nine of the eleven variables were related to the modernism score when the confounding effects of

Table 36. Multiple regression modernism score by reference group characteristics

Source of Variation	d.f.	Mean Square	F	Level of Significance
Regression	9	1,799.64	89.34	.01
Residual	723	20.14		
Total (C.F.M.)	732			
Correction	1			
Grand total	733			

Square of the multiple correlation	0.527
Square root of the residual mean square	4.488
Intercept	28.105

X Variable	T	Estimated Partial Regression Coefficient	Useful Increment of X Variable	Change in Modernism Score (Increment x Coefficient)
Age	3.83**	-0.53	10 yrs.	5.30
Education	10.22**	6.35	4 yrs.	25.40
Income	2.06**	0.60	$3,000	1.80
Occupational status	5.60**	0.48	9	4.32
Mobility (M.E.M.)	1.98**	1.67	1	1.67
Residence	0.54	1.98	(1)*	1.98
Sex	2.85**	-9.61	(1)*	9.61
Ethnicity	5.93**	26.02	(1)*	26.02
Media use (Printed)	3.77**	1.40	3.5 hrs.	4.90

*Residence, sex, and ethnicity are dichotomous variables such that there are only two values, rural or urban, male or female, Spanish American or Anglo.

**Significant at the 0.01 level

the others have been controlled. However, three variables—education, occupational status, and ethnicity—account for nearly all the variation. Only about half of the total variance has been accounted for—an auspicious beginning perhaps, but not a satisfactory end. Shortcomings of the occupational status measure have already been discussed. Years of education is a gross measure of quantity. Quality and content of education should be more highly related to value orientations. However, such measures are difficult to devise. Substantial improvements should be possible using this technique by sharpening the measures.

Only two variables—education and income—were associated with converging scores. Education may be causing acculturation although causality is probably not entirely unidirectional. The exact nature of the relationship between income and value orientations is more problematic and is discussed in more detail below. As can be seen in table 36, a four-year increment

in education results in some 25 units of the modernism scale which is only slightly less than the 26-unit difference between ethnic groups. There is just less than 10 units difference between sexes, while 10 years of age is associated with only 5.3 units difference. Other variables even in sizable increments are associated with smaller differences. The upshot of all this seems to be that education is the way to change value orientations and thereby cultures. This is not unexpected, but the rather small impact of other types of contact is less than anticipated. This indicates that value orientations do not change markedly even through extensive cross-cultural contact.

Hypothesis 11 stated that when other relevant factors were controlled, there are no ethnic differences in income. It has been demonstrated that complete acculturation of the Spanish-Americans has not occurred, i.e., their value orientations have not converged with those of the Anglo majority. The question becomes: Does ethnicity account for a significant part of the variation in income after all of the factors have been taken into account?[11] Results in table 37 show that ethnicity still accounts for a significant amount of variance after other relevant factors have been taken into account.

Several lines of interpretation of this result might be followed. One is to imply that some kind of discrimination is occurring, since after everything—even value orientation—is taken into account, Spanish-Americans still earn less than Anglos. Another tack would be to recheck the measures. Only 30 percent of income variance has been accounted for. Second, "culture" has not been fully characterized by the modernism score;

[11] To do this the MUREG regression analysis Beta subhypothesis test was used. It calculates the variation due to all the independent variables minus any one (s) specified and then calculates further variation due to the specified independent variable (s).

Table 37. Multiple regression income of head of household by reference group characteristics

Source of Variation	d.f.	Mean Square	F	Level of Significance
Reduction (all other Xs)*	9	442,915,998	16.78	.000
Reduction (ethnicity)	1	116,410,500	4.41	.036
Residual	364	26,387,979		
Total (C.F.M.)	374			
Correction	1			
Grand total	375			

Square of the multiple correlation	0.299
Square root of the residual mean square	5,136.92
Intercept	-10,121.84

*All others = military service, health, age, education, mobility, residence, sex, modernism score, and media-use.

Table 38. Results of multiple regression occupational status by reference group characteristics with and without modernism score

X Variable	Excludes Modernism T	Includes Modernism T
Military service	0.36	0.51
Health	5.06**	4.04**
Age	3.64**	4.18**
Education	12.71**	8.81**
Mobility (MEM)	1.36	0.77
Residence	0.18	0.05
Sex	2.90**	2.25**
Media use (Printed)	0.53	0.16
Ethnicity	2.31**	0.89
Modernism	--	4.74
Square of the multiple correlation	0.533	0.560

**Indicates significance at the .01 level

this scale is only a sample of the relevant values. Third, information concerning income is probably the least reliable body of data in the whole study because many people, particularly the self-employed, underestimated their incomes. (Some people were convinced that this study might fall into the hands of the Internal Revenue Service.)

Even with a rigorous methodology, the problem of interpreting the ethnic difference remains. It is important to know that there is a difference so that a search for the reasons will continue. To evaluate the utility of the modernism score, it was included in regression analyses of income and occupational status. In the analysis of income, both ethnicity and modernism were significant, along with age, sex, and occupational status. In analyzing occupational status, when ethnicity alone was included (as the only measure of culture), it was significant, but when modernism was also included, the effect of ethnicity was wiped out (table 38). This means that the modernism score has adequately described the nature of cultural differences in the attainment of occupational status. At least the modernism score is more sensitive than the concrete measure, ethnicity.

Where Change Is Occurring

The purpose of this study was to probe into the essence of culture to identify and measure as accurately as possible what it is about culture that differentiates one group from another. To this end a modernism scale composed of six value orientations was developed. These value orientations are only a sample of all those which differentiate Spanish- and Anglo-Americans. The scale score is the summary measure of

the intangible "world-view" which characterizes a particular culture. The gross tangible indicator of culture is ethnicity—Anglo- or Spanish-American.

This probe into the technique provides evidence that would work in a bilingual, bicultural setting across the total variation in a large population. Reference group characteristics which result in more cross-cultural contact are generally associated with more modern values in both ethnic groups. However, the changes are largely parallel from one subgroup to another; there are very few points where much convergence occurs. Only higher levels of education and of income were associated with convergence of value-orientations of the ethnic groups, and even these convergences were not complete. It is argued that education is, in the main, a cause of acculturation (convergence of value orientations) while income is, in the main, an effect. It was shown that ethnicity has an effect on income after other relevant factors have been held constant. The evidence indicates that the Spanish-Americans are still an "acculturating" minority who do not yet fully participate in the material affluence of American society.

Profiles of Traditional and Modern

The modern man believes that his fate is somewhat in his own hands, he prefers a job with some challenge even though this may also entail some insecurity, he is willing to sacrifice today to have a better future, he does not put family considerations before all others, he is at ease in dealing with strangers, and he is not superstitious. The traditional man believes that he has little control over his own destiny, he prefers security to challenge in his job, he is most concerned with what happens today and much less about the future, he puts much emphasis on the welfare of his relatives, he is more at ease in dealings with those he knows personally, and he tends to be somewhat superstitious.

The modern man tends to have more education, higher income, and higher socioeconomic status. He is younger, in better health, and reads more. If he is Anglo, he is likely to have been born and lived for a time outside the region, and is more likely to be an urban resident. If he is Spanish-American, he probably has had military service, uses English as much or more than Spanish, and tends to make relatively greater use of radio and TV than other Spanish-Americans. However, the modern Spanish-American has maintained some cultural identity. He will still hold values that differ somewhat from Anglos with similar social characteristics.

Implications and Applications of the Modernism Scale

This work has examined and attempted to elaborate two basic sociological concepts—culture and values. Through the modernism scale, it attempts to sharpen and

focus them into a useful sociological tool. From the theoretical perspective, the modernism scale is not an isolated tool but one of an integrated set. It will perform specialized tasks, but few if any jobs can be performed with it alone. Hopefully, the tool has been refined and improved. Its application has been extended; it will work over the full range of variation in a large adult population and do so using two languages. Whether it can ever be sufficiently refined and extended to account for the whole of ethnic differences in a broad sphere of human activity—e.g., the economy—is only speculation. Such an achievement would be very important and relevant. Results of analysis of occupational status indicate that it may be possible.

This approach to the problems of minority groups has been roundly criticized, as has the traditional-modern scale. Attempts to describe cultural differences are not judgments of which characteristics are good and which are bad. If cultural differences are to be taken into account when programs of planned change are formulated (and even the most vocal critic would agree that they should be), then somehow these cultural differences must be identified. The nature of culture must be probed.

This minority's problem was in many ways similar to Anglo groups in other regions of the United States, i.e., physical isolation and a crumbling economic base. Their value orientations have been described in similar terms. So while there are undoubtedly cultural differences, there are also pan-cultural similarities. The minority's current economic difficulties are not predominantly caused by culture, whether it be by "defective values" or by discrimination.

Some will suggest that one must look at "structure" for the real causes and cures of the acculturation dilemma. Two "structural" causes were the profound changes in American agriculture and the early Anglo administration which permitted so much land to be lost by the Spanish-Americans. But knowledge of these "flaws" can scarcely lead to workable solutions. The resource-man ratio permits no really satisfactory agricultural solution for more than a few people. Even when profound programs of planned "structural" change are being contemplated, some knowledge of culture is not less important. Culture may be a product of past experiences (and structures) but it is also, at least in the short term, a determinant of the responses to future situations (and structures).

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Appendix A

QUESTIONNAIRE

Number_____

I. THE RESPONDENT

1. Interviewer _____
2. Location _____
3. Sex M F
4. Marital Status S M O
5. Primary language used in household S E B O
6. Ethnicity SA A
7. Is the head of household male or female? M F
8. Where is the head of household's birthplace? _____
9. Has the head of household ever been in the military service? yes no
10. Have you ever been to Denver, Los Angeles or other major cities? yes no
11. How many times a year do you go to Albuquerque? _____

II. PARTICIPATION

12. Do you have a radio? yes no
13. TV? yes no
14. Do you receive newspapers? yes no
15. magazines? yes no
16. What is your primary source of news? Radio & TV____
(second most important) Newspapers & Magazines____
Friends & Relatives____
17. How many hours per week do you spend watching or listening to:
State & Local News____
National News____
Sports & Entertainment____
Educational Programs____
18. How many hours per week do you spend reading about:
State & Local News____
National News____
Educational Things____
For Enjoyment____

19. In which county does the head of household earn most of the family income? _____

20. Has the head of household ever worked outside the county in the past five years? yes no
    a. If yes, and in New Mexico, what county? _____
    b. If yes, and outside New Mexico, what state? _____

21. How many years has the head of household lived in North-central New Mexico? _____

22. What is the present health of the head of household? P F G E

23. What is the age and number of years of formal education for each member of the household?

Household Members															
Age															
Formal Education (Yrs.)															

CODE: F - Father C - Children Grade School = 8 yrs. College = 16 yrs.
M - Mother O - Other High School = 12 yrs.

24. Has the head of household ever completed any type of job training? yes no
    A. If yes, by which of the following means and for how long? Duration
    a. Completed an apprenticeship a. ___ _____
    b. Military vocational training b. ___ _____
    c. Public school vocational training c. ___ _____
    d. Veteran or government sponsored d. ___ _____
    e. Private vocational school e. ___ _____
    f. Company sponsored formal training f. ___ _____
    g. On the job training g. ___ _____
    h. Other: (specify by which means)_____ h. ___ _____

25. What is the employment record for the head of household for 1968?*

Job Description	Location	Duration of Each Job	Income or Wage Rate	Hours per Week

*If farm, state the size of unit in acres.

26. Did any of the other members of your household have a job outside the home in 1968? yes no

A. If yes, fill in the following table for each member who works outside the home.

Job Description	Location	Duration	Income or Wage Rate	Hours per Week

27. Which situation applies to your house? Own Rent Other
(Circle one and if other, specify)_____

28. How old is the house? _____

29. Do you own a car or pick-up truck? yes no

A. If yes, how many? _____

30. Has there been any substantial change in the total income of the household in 1969? yes no

A. If yes, please explain:

_____

_____

31. This question is concerned with the head of household's willingness to commute under varying conditions. (Enumerator explains the different driving time situations and then presents the different conditions in order. If person is unemployed, have them base the answers on the head of household's last employment.)

		Conditions					
	Willingness to commute	Equal Conditions	$100/mo	$100/mo+ Expenses	$200/mo	$200/mo+ Expenses	$300/mo
0	Not willing to commute						
1	15 minutes driving time one way						
2	30 minutes driving time one way						
3	1 hr. driving time one way						
4	1 1/2 hr. driving time one way						
5	Commute to work and return home only on weekends						

32. This question is concerned with willingness to relocate or move to different areas. (Enumerator--if it is the head of household, ask for his willingness to move; if the wife, ask for the family's willingness; if other person, ask for person's willingness. Have person base their answers on present or most recent employment. Enumerator shows the areas and then presents the different conditions.)

		Conditions					
	Willingness to Relocate	Equal Conditions	$100/mo	$100/mo +Moving Costs	$100/mo+Moving Costs + Job Training	$200/mo	$300/mo
0	Not willing to relocate						
1	Only within the county						
2	Only within the region						
3	Only within the state						
4	Only as far as neighboring states						
5	Anywhere in the U.S.						
6	Preference						

33. Which of the following factors do you think is more important in making a decision to relocate or move? (Rank the three most important)

a. Money a.___
b. Location b.___
c. Health c.___
d. Climate d.___
e. Family e.___
f. Home ownership f.___
g. Changes in the cost of living g.___
h. Other: (Specify)_____ h.___

34. Has the household or head of household ever moved in the past? yes no
A. If yes, fill in the following table.

Year	From To	Reason for Moving

IV. RISK-TAKING

The kind of job I would most prefer would be:

35. A job where I am almost always on my own. 1
    or
    A job where there is nearly always someone available to help me on problems that I don't know how to handle. 2

36. A job where I have to make decisions by myself. 1
    or
    A job where I have to make few decisions by myself. 2

37. A job where I am the final authority on my work. 1
    or
    A job where there is nearly always a person or a procedure that will catch my mistakes. 2

38. A job where I would be either highly successful or a complete failure. 1
    or
    A job where I could never be too successful, but neither could I be a complete failure. 2

39. A job that is constantly changing. 1
    or
    A job that is changing very little. 2

40. An exciting job, but one which might be done away with in a short time. 1
    or
    A less exciting job, but one which would undoubtedly exist in the company for a long time. 2

V. LAND

41. Do you now or have you ever owned land for growing crops or raising livestock? yes no presently formerly

42. Do your parents own farm or ranch land? yes no

43. Do you (they) have clear or certain title to that land? yes no not sure

44. How much irrigated land do you (they) own? ___acres

45. How much grazing on dryland do (they) own? ___acres

46. Do you lease land or hold animal permits from the federal government? yes no

(Note to interviewer: please explain type of question following)

47. There are different reasons for owning or wanting to own farm or ranch land:

1) Some people frequently buy and sell land, always trying to own better or larger farms or ranches in order to earn higher incomes. They do not care where their land is located as long as they make more money from their farming or ranching operations. 1

2) Others try to keep the same land all their lives. They get to know their land, its fertile spots and its poorer spots. Although they want to earn a living from their land, they also take personal pleasure in simply owning the land and in knowing all they can about it. 2

Which of these two reasons for owning land do you think is the better one?

48. There are various ways to think about the meaning of family land ownership:

1) Some people would willingly sell land inherited from their parents if the price were high enough. They believe that money in the bank or in other investments is just as good as owning land. They feel that having a high family income is the best way to provide for their children's future. 1

2) Others are proud of the land their parents have left them and refuse to sell it even for a very high price. The land has helped to provide a living for the family, and they want their children to own it some day. Even if they are forced to move away, they try to keep the land for their children. 2

Which of the two do you think is the better idea?

49. There are different ways of looking at the rights and responsibilities of land ownership:

1) Some people feel that land is like any other kind of property. It is theirs to use as they please. For example, it is no one else's business where they hire their laborers. As owners, they have the right to make all the decisions. 1

2) Others feel that owning land in a community includes the responsibility to use that land to provide jobs and security for as many local people as possible. When labor is needed, they hire local workers. They believe that both the land and the community should be preserved for their children and for future generations. 2

Which of these two views do you think is the better one?

50. Persons have various ideas about the nature of land ownership:

1) Some people feel that ownership comes from a carefully preserved written title, filed and protected by the county or state. They consider themselves to be the true owners even if they do not live or work on the land themselves. 1

2) Others believe that true ownership can come only from working the land and experiencing the sweat, the problems, and sometimes the joys of growing their own crops and livestock. When land is involved, they feel that ownership through use is truly as important as legal ownership. 2

Which of these two ideas do you most agree with?

51. Which of the following would it be best for a man to be?

The owner of a small ranch or farm who has to work off the farm part of the time to support his family. 1

or

A renter who owns no land but who earns enough income from farming or raising livestock to support his family. 2

52. When selling land, the owner should sell

To someone within the community. 1

or

To the person who offers the highest price, even if the buyer is a rich outsider. 2

53. The public lands (e.g. National Forest or BLM land) should be

Utilized primarily to benefit residents of the area nearest to them. 1

or

Managed for the use and enjoyment of all U.S. citizens, even out-of-state tourists, hunters, and fishermen. 2

Statement of Explanation: In certain regions of New Mexico, particularly in the northern part of the state, there is uncertainty about the validity of some private land titles. The New Mexico State Government is considering a program to clearly determine and guarantee all private land titles in the state.

54. Do you believe there is a definite need for this kind of program? yes no

55. The State government:

Can be trusted to be fair in surveying the land and in establishing exact legal land ownership. 1

or

Would probably be partial to rich or politically influential owners at the expense of the common people. 2

56. In considering a title clearance program, the state government is probably more interested in:

Increasing the tax revenue. 1

or

Improving conditions for the landowners involved. 2

57. The more probable result from a title clearance program would be:

All landowners would benefit because it would be easier to buy and sell land. 1

or

Most of the poor landowners would eventually lose their farms to rich and powerful landowners. 2

58. Secure land titles are most important because they would

Give most landowners greater peace of mind. 1

or

Improve economic conditions by making it easier to buy and sell land. 2

59. What other advantages or disadvantages might come from a state title clearance program?

_____

_____

Now we have some attitude and opinion items. There are no right or wrong responses to the following statements. They are simple attitudes and opinions, some people will agree and some will disagree with every statement. The best response is the one that most accurately expresses your own personal feelings. You have four possible responses: strongly agree, agree, disagree and strongly disagree. If you feel strongly about any item, please indicate a strong agreement or disagreement, otherwise you may simply agree or disagree. Please respond to each statement as you feel about it.

VI. MAN-NATURE

60. One cannot change his own fate (destiny). SA A D SD

61. All I want out of life, in the way of a career, is a secure, not too difficult job, with enough pay to afford a nice car, and eventually a home of my own. SA A D SD

62. When a man is born, the success he is going to have is already in the cards, so he might as well accept it and not fight against it. SA A D SD

63. One should spend his free time relaxing and not in worrying about things that might help him with his work. SA A D SD

64. The secret of happiness is being content with what comes your way and not expecting too much out of life. SA A D SD

65. The best way to judge a man is by his success in his occupation. SA A D SD

66. A person can plan his future so that everything will come out all right in the long-run. SA A D SD

67. The most important qualities of a real man are determination and driving ambition. SA A D SD

68. The end of the world will likely come before there is much progress in Northern New Mexico. SA A D SD

VII. MAN-MAN

69. Obligations to one's parents are a great handicap to a young man today. SA A D SD

70. If you have the chance to hire an assistant in your work, it is better to hire a relative than a stranger. SA A D SD

71. When young people make plans for the future, parents need not be given first consideration. SA A D SD

72. A man should be willing to sacrifice everything for his family (parents, brothers and sisters). SA A D SD

73. Meeting new people is usually embarassing. SA A D SD

74. People in a big city are cold and impersonal; it is hard to make friends there. SA A D SD

VIII. TIME

75. Man's life should be guided more by the problems of the present than by his concern for the future. SA A D SD

76. Planning for the future makes a person unhappy since plans hardly ever work out anyway. SA A D SD

77. Nowadays with world conditions the way they are, the wise person lives for today and lets tomorrow take care of itself. SA A D SD

78. In many churches, the religious ceremonies (church services) are changing from what they used to be.

Some people welcome changes in religious ceremonies. They feel that new ways are ususally better than old ones, and they like to keep everything--even ceremonies--moving ahead. 1

Other people are unhappy because of the changes and feel that the old ways for religious ceremonies are best. 2

Which way do you most agree with?

79. People often have very different ideas about what has gone before and what we can expect in life.

Some people believe it best to give most attention to what is happening now in the present. They say that the past has gone and the future is much too uncertain to count on. Things do change, but is sometimes for the better and sometimes for the worse so in the long-run, it is about the same. 1

Other people believe that it is almost always the ways of the future--the ways which are still to come--which will be best. These people think the best way to live is to look a long time ahead, work hard, and give up many things now so that the future will be better. 2

Which way do you most agree with?

IX. SCIENCE

80. It is bad luck to have a black cat cross one's path. SA A D SD

81. Scientists and engineers will eventually be able to solve most any problem we have. SA A D SD

82. One should rely heavily on scientific advice when making decisions on how or when to do things (e.g. buying a car or planting a garden). SA A D SD

83. For most common illnesses, home remedies are better than modern medicine. SA A D SD

84. There is probably no disease that modern medicine will not be able to cure in the future. SA A D SD

X. STATE

85. Did you vote in the last election? yes no

86. The control of New Mexico is in the hands of a small group and an ordinary citizen does not have much to say about things. SA A D SD

87. On the whole, state officials are honest and eager to serve all the people impartially. SA A D SD

88. Public money spent on welfare for the past few years could have been used more wisely for other purposes.

89. Government officials are more interested in a good paying job and an easy life than they are with serving the people. SA A D SD
(Mention Tijerina and the Alianza)

90. The Alianza and similar organizations are the only ones that can ever improve the situation of the Spanish-American people. SA A D SD

91. Would you say that Tijerina and the Alianza have done: much good, little good, no good, or harm for the Spanish-American people in New Mexico? MG LG NG H

XI. INTERVIEWER IMPRESSIONS

1. Level of understanding of respondent: Hi___ Med___ Lo___

2. How long did the formal interview take?_____ The conversation?_____

3. Degree of cooperation and/or enthusiasm: Hi___ Med___ Lo___

4. Was there any major distraction during the interview?

_____

_____

5. Was the respondent suspicious or evasive on any item(s)?

_____

_____

6. Did the questions stimulate the respondent?_____

7. What important (to him) issues did he bring up or discuss?

_____

_____

8. Any relevant comments or impressions?

Appendix B

SOURCE OF BORROWED ITEMS

1) The Risk-Taking scale was developed by Lawrence K. Williams in "The Measurement of Risk-Taking Propensity in an Industrial Setting" (Doctoral dissertation, University of Michigan, 1960). Items 4, 5, 6, 7, 8, and 9 were used by Kahl in his study and were actually taken from that source (Kahl, p. 34).

2) Items 1 and 10 were taken with some modification from a questionnaire used by William F. Whyte and Lawrence K. Williams in research in Peru.

3) Items 2, 11, and 12 were taken from "Achievement and the Achievement Syndrome Among Mexican-American Youth," by James G. Anderson and Frank B. Evans (To be published in Measuring Socio-Cultural Change, Paul Kutsche ed., Boulder: University of Colorado Press).

4) Items 15, 16, 19, and 22 were taken from or suggested by the "Long Form of the Minnesota Survey of Opinions" in Handbook of Research Design and Social Measurement by Delbert C. Miller, New York: David McKay Company, Inc., 1964.

5) Item 13 was taken with some modification from the Harvard Value Studies' questionnaire (Kluckhohn, pp. 85-86).

6) Items 3, 14, 20, 21, 27, and 28 were taken (some with modification) from Kahl (Kahl, pp. 30-34).

7) Items 17, 18, 23, 24, 25, and 26 were developed by the author.

Appendix C

CORRELATION MATRIX OF MODERNISM ITEMS

Item	4	5	6	7	8	9	1	2	3	27	28	14	15	16
4	....	.383	.368	.226	.160	.161	-.151	-.187	-.110	-.089	-.028	-.100	.072	-.088
5		....	.319	.308	.303	.187	-.257	-.322	-.250	-.181	-.044	-.291	.165	-.184
6			....	.305	.100	.174	-.183	-.189	-.123	-.043	-.040	-.115	.053	-.179
7				....	.212	.256	-.165	-.263	-.224	-.143	-.040	-.197	.085	-.099
8					....	.239	-.280	-.341	-.197	-.270	-.135	-.257	.110	-.176
9						....	-.257	-.264	-.136	-.207	-.208	-.167	.233	-.162
1							....	.372	.259	.300	.198	.211	-.131	.170
2								....	.364	.515	.134	.405	-.153	.311
3									....	.338	.121	.225	-.090	.158
27										....	.314	.433	-.199	.282
28											....	.159	-.115	.154
14												....	-.221	.329
15													....	-.236
16														....
19														
20														
10														
11														
12														
13														
17														
24														
25														
18														
26														
21														
22														
23														

Item	19	20	10	11	12	13	17	24	25	18	26	21	22	23
4	-.161	-.010	-.053	-.156	-.198	-.038	-.178	-.002	-.016	-.165	-.016	.014	-.003	.033
5	-.291	-.095	-.138	-.273	-.279	-.112	-.138	-.036	.054	-.208	.069	-.081	-.008	-.080
6	-.120	-.028	-.088	-.127	-.171	-.045	-.163	-.118	-.027	-.137	.018	-.058	.018	-.055
7	-.177	.001	-.055	-.180	-.238	-.101	-.150	-.057	-.033	-.123	.003	.017	.036	-.065
8	-.169	-.112	-.088	-.229	-.181	-.045	-.154	-.039	.061	-.144	.022	-.025	.016	-.071
9	-.194	-.131	-.058	-.191	-.148	-.032	-.090	-.061	.056	-.115	-.013	-.040	-.024	-.118
1	.155	.097	.096	.265	.272	.049	.072	.134	-.066	.174	.043	.103	-.009	.101
2	.382	.138	.220	.379	.382	.111	.284	.163	.034	.369	.034	.138	.032	.215
3	.211	.068	.234	.264	.277	.182	.140	.090	.045	.190	.036	.066	-.096	.120
27	.288	.116	.142	.262	.238	-.014	.323	.200	.032	.327	.024	.104	-.006	.123
28	.138	.104	-.015	.122	.116	-.065	.103	.049	-.058	.083	.088	.066	.113	.093
14	.365	.086	.120	.254	.253	.019	.236	.091	.036	.312	-.015	.062	-.048	.076
15	-.155	-.016	-.020	-.020	.004	.009	-.058	-.010	.061	-.138	.094	.059	-.010	.027
16	.266	.054	.110	.201	.142	-.037	.188	.069	.064	.122	.038	.147	.021	.109
19	....	.258	.180	.349	.276	.129	.232	.089	.032	.268	-.014	.160	-.037	.137
20		....	.157	.235	.095	.074	-.090	.094	.057	.075	.046	.128	-.009	.199
10			....	.283	.369	.288	.139	.081	.096	.231	-.006	.181	.060	.164
11				....	.431	.135	.219	.005	-.030	.255	-.046	.181	-.032	.232
12					....	.256	.151	-.020	-.041	.282	.043	.243	-.039	.243
13						....	.032	-.018	-.056	.087	-.039	.068	-.053	.088
17							....	.106	.119	.358	.007	.037	.003	.039
24								....	.236	.099	.219	.032	-.039	-.019
25									....	.032	.078	-.036	-.023	-.046
18										....	-.065	.119	.096	.203
26											....	.020	-.016	-.019
21												....	.158	.417
22													....	.199
23														....